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APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

MESSAGE

FROM

THE PRESIDENT OF THE UNITED STATES,

TRANSMITTING

A communication from the Secretary of War, together with a report relative to the expenditures for rivers and harbors.

JANUARY 23, 1884.—Referred to the Committee on Rivers and Harbors and ordered to be printed.

To the House of Representatives:

I transmit herewith, in response to the resolution of the House dated January 11, 1883, a letter dated the 21st instant, from the Secretary of War, together with a report submitted to him by the Chief of Engineers, embodying the information, so far as the same can be furnished from the records of his office, and a statement prepared in the Treasury Department respecting the expenditures for rivers and harbors, called for by the said resolution.

CHESTER A. ARTHUR.

EXECUTIVE MANSION,
January 22, 1884.

WAR DEPARTMENT,
Washington City, January 14, 1884.

SIR: I have the honor to submit herewith a report dated the 11th instant, from the Chief of Engineers, embodying the information, so far as the same can be furnished from the records of his office, called for by a resolution of the House of Representatives, dated January 11, 1883, as follows:

Resolved, That the President be requested to transmit to the House a statement showing the aggregate amount which has been expended in the improvement of rivers and harbors from the beginning of the Government to the present time, the amount annually expended, the aggregate and annual expenditure in the improvement of each river and each harbor, and, as far as practicable, the amount expended in each State, accompanied by references to the laws authorizing each of such expenditures, and also a statement showing, in brief, what benefit to commerce, if any, has resulted from each of said expenditures, and stating the navigable capacity of each of said rivers and harbors before and after improvement; and also to inform the House whether any moneys have been appropriated or expended in the improvement of rivers or harbors not navigable within the legal definition of the word navigable as defined by the Supreme Court of the United States; and also to inform this House whether any money has been appropriated or expended for the improvement of any river or harbor not within the United States, with such other information as he may deem proper to communicate.

I also have the honor to submit as supplemental to the report of the Chief of Engineers a statement prepared in the Treasury Department in relation to expenditures for rivers and harbors from the beginning of the Government to the 30th of June, 1882, referred to by the Chief of Engineers, as giving information not recorded in his office prior to the year 1871.

The resolution which was referred by you to this Department for the desired information is herewith returned.

Very respectfully, your obedient servant,

ROBERT T. LINCOLN,
Secretary of War.

The PRESIDENT.

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ii APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

OFFICE OF THE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
Washington, D. C., January 11, 1884.

SIR: In reply to the reference to this office of the resolution of the House of Representatives of January 11, 1883, requesting the President to transmit to the House certain specified information respecting the expenditures for river and harbor improvements, and the benefit to commerce resulting therefrom, I have the honor to state that as regards the financial exhibit called for by this resolution, the records of this office embrace at present only the amounts annually expended on each work of improvement since 1871, with the total expenditure for such works during the same period, and that similar information covering in full the period "from the beginning of the Government" to the date of the resolution can only be found in the Treasury Department, to which the accounts of all disbursements are transmitted for settlement after examination in this office, and which, besides, had, in some cases, the control and disbursements of such works in the earlier days of the Government. As supplying, therefore, this information, I would respectfully refer to Senate Ex. Doc. No. 196, Forty-seventh Congress, first session, which contains, in detail, the expenditures of the United States from March 4, 1789, to June 30, 1882, for public buildings and other public works, and for rivers and harbors, forts, arsenals and armories, transmitted to the Senate by the honorable the Secretary of the Treasury, in compliance with the requirements of a resolution of that body of July 22, 1882. This document shows "the aggregate amount which has been expended in the improvement of rivers and harbors from the beginning of the Government (to June 30, 1882); the amount annually expended; the aggregate and annual expenditure in the improvement of each river and each harbor, and the amount expended in each State, accompanied by references to the laws authorizing each of such expenditures," and fully covers the requirements of the resolution of the House of Representatives of January 11, 1883, up to the above date, as far as relates to the expenditures of public moneys for the purposes in question.

To comply with requirements contained in the succeeding part of this resolution, there is transmitted herewith "a statement, showing in brief," as far as the records of this office will admit, an account of "all river and harbor improvements upon which public moneys have been expended," with "the navigable capacity of each river or harbor before and after improvement," and, as far as practicable, "the benefit to commerce" resulting therefrom.

In this statement, the several public works are arranged in the order in use in this office, as follows:

1. Harbors and rivers on the Atlantic coast, and
2. On the Gulf of Mexico.
3. Western rivers.
4. Harbors and rivers on the Northern and Northwestern Lakes, and
5. On the Pacific coast.

As this arrangement differs from that adopted by the Treasury in the above-named document, No. 196, reference is made under the head of each work to the page of this document upon which the corresponding financial statement will be found, and in continuation thereof there is also added, under the head of each work, the amount appropriated, if any, by the river and harbor act of August 2, 1882, and the amount expended thereon during the fiscal year ending June 30, 1883.

With respect to "the benefit to commerce that has resulted from each expenditure," it should be remarked that although an increase of the depth of a harbor or its approaches, or the opening of a river to navigation, or the permanent increase of its depth, are benefits to commerce by creating greater facilities for navigation, the extent of this benefit is not readily ascertained. It cannot invariably be found by a comparison of the commercial statistics of late years with those of a former period taken from the reports of the officers in charge of the improvement, because there is no reliable source from which these statistics can always be obtained by them, and that they are frequently estimates of interested parties. Nor does it follow that unless there has been an increase of commerce the benefit resulting from the improvement has been of little value, since an increase or diminution of commerce may arise from local causes entirely independent of the facilities afforded to navigation by the improvement itself. A comparison of the money value of the trade at different dates does not always indicate the relative benefit to commerce for the same reason. Nor does a comparison of the number of vessels trading at a port or on a river invariably indicate the comparative amount of commerce, since an increase of the depth obtained by improvement enables the employment of vessels of a larger class, and although trade may have become greater, the number of vessels engaged in it may be less.

It is further required by this resolution to inform the House "whether any moneys have been appropriated or expended upon the improvement of rivers or harbors not navigable within the legal definition of the word navigable as defined by the Supreme Court of the United States."

The Supreme Court declares (11 Wallace, 411) that—

1. A river is a navigable water of the United States when it forms by itself, or by its connection with other waters, a continuous highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water.

And—

2. If a river is not of itself a highway for commerce with other States or foreign countries, or does not form such highway by its connection with other waters, and is only navigable between different places within the State, then it is not a navigable water of the United States, but only a navigable water of the State.

The following localities of works of improvement upon which public moneys have been expended fall within the above definition:

Lake Winnepissiogee, New Hampshire.—This lake and its tributaries lie wholly within the State, their waters being the chief source of the Merrimac River. A dam built at its outlet forms a reservoir of these waters, which is under the control of an incorporated company, by which the water-power is regulated and supplied to factories along the Merrimac below. They do not form by themselves, or by their connection with other waters, a continued highway over which commerce is or may be carried on with other States.

The Yadkin River, within the limits of North Carolina, is entirely cut off by a narrow mountain defile of 30 feet width through which it descends, in a torrent, 50 feet in 2 miles; and has, at present, no navigable connection with its lower part, known as the Great Pee Dee.

French Broad River in North Carolina.—The navigable connection between this and the lower portions of the river in Tennessee is interrupted below Asheville by rocky rapids, having a descent of about 18 feet to the mile, and not susceptible of any practical improvement. The outlet for the trade of this portion of the river is dependent upon two railroads recently completed.

To complete the requirements of this resolution, I would further state that no "money has been appropriated or expended for the improvement of any river or harbor not within the United States." Improvements have, however, been made, or are in progress, of channels, portions of which form international boundaries.

The resolution of the House of Representatives of January 11, 1883, is herewith returned.

Very respectfully, your obedient servant,

H. G. WRIGHT,
Chief of Engineers,
Brig. and Brvt. Maj. Gen.

Hon. ROBERT T. LINCOLN,
Secretary of War.



STATEMENT GIVING, IN BRIEF, AN ACCOUNT OF ALL RIVER AND HARBOR IMPROVEMENTS UPON WHICH PUBLIC MONEYS HAVE BEEN EXPENDED, WITH THE NAVIGABLE CAPACITY OF EACH, BEFORE AND AFTER IMPROVEMENT, AND, AS FAR AS PRACTICABLE, THE BENEFIT TO COMMERCE RESULTING THEREFROM.

BREAKWATER IN SAINT CROIX RIVER NEAR CALAIS, MAINE.

(Page 147.)

Built in 1856 of crib-work, ballasted with stone; rebuilt in 1881, it having become dilapidated from decay of the timber. Its object is to prevent vessels being forced by tidal currents upon "The Ledge," 5 miles below Calais. It has answered its object in a very satisfactory manner.

Value of imports at Calais for 1881, \$362,000; exports, \$1,500,000.

LUBEC CHANNEL, MAINE.

(Page 144.)

This channel forms the eastern boundary of the State of Maine. First appropriation, 1879. Before improvement it was only available for navigation at high water, the least depth over several bars being only 5 feet at mean low water. When completed it will give a direct passage at all times of tide for vessels bound to Eastport, Calais, and other American ports, saving a distance of 16 miles around Campo Bello Island. It will also become available for refuge to a safe anchorage. The amount estimated for its completion is \$25,000. In 1881, amount of imports in the collection districts, \$755,760; exports, \$355,310.

July 1, 1882, amount available	\$67,843 15
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/>
	87,843 15
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$66,325 99
July 1, 1883, outstanding liabilities	6,338 27
	<hr/>
	72,664 26
July 1, 1883, amount available	<hr/>
	15,178 89

MACHIAS RIVER, MAINE.

(Page 145.)

First appropriation, 1873. The improvement has been the deepening of the channel and the removal of a large rock in front of Machias. The available depth has been increased from 3 feet to 6 feet at mean low water, with a channel of approach 100 feet wide, by which commercial facilities have been materially increased.

MOOSE-A-BEC BAR AT JONESPORT, MAINE.

(Page 145.)

First appropriation, 1881. Located on a frequented thoroughfare for sailing vessels and steamers, which before improvement was tortuous and obstructed by dangerous ledges of rock. It has been straightened and deepened from 6 feet to 14 feet at mean low water. When completed, this channel, now 85 feet, will be 200 feet wide and will add greatly to the ease and safety of general navigation, and benefit the large fleet of vessels constantly passing that are engaged in trade with the British Provinces. Estimate for completion, \$20,000.

July 1, 1882, amount available	\$514 28
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,514 28
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$132 03
July 1, 1883, outstanding liabilities	58 00
	<hr/>
	190 03
July 1, 1883, amount available	<hr/>
	10,324 25

BELFAST HARBOR, MAINE.

(Page 143.)

First appropriation, 1876. Work commenced in 1879 and completed in 1880. Consisted of the removal of sunken ledges and shoals to a depth of 10 feet at mean low water, increasing the facilities of access, and permitting the use of larger vessels.

July 1, 1882, amount available	\$3,000 00
July 1, 1883, amount available	3,000 00

NARRAGUAGUS RIVER, MAINE.

(Page 145.)

First appropriation, 1871. Before improvement the channel had a depth of over 2 feet at low water, obstructed by rocks and ledges, by the removal of which a navigable depth of 6½ feet at low water has been obtained.

A considerable increase of the lumber business has resulted from this improvement.

SULLIVAN'S RIVER AND FALLS, MAINE.

(Page 147.)

First appropriation, 1871. Before improvement the least depth on one of the most dangerous ledges, Hatcher's Rock, was only 6 inches at low water. There is now a clear channel of 300 feet in width and 7 to 10 feet depth.

The removal of this and other dangerous rock obstructions has greatly increased the lumber and granite business of this region.

UNION RIVER, MAINE.

(Page 148.)

First appropriation, 1870. Before improvement portions of the channel were dry at low water. There is now a depth of 3 to 4 feet at that stage, or 15 feet at high water.

By deepening this stream and clearing it of rocks and other obstructions from its mouth to Ellsworth, the head of tide, commercial facilities have been very much increased.

PENOBSCOT RIVER AND BAY, INCLUDING HARBORS AT BANGOR, BUCKSPORT, AND CAMDEN, MAINE.

(Pages 143 and 145.)

The improvements at and in the vicinity of these points may be classed together as having, by removal of obstructions and deepening of channels, very much increased the facilities of navigation on the Penobscot, permitting the use of larger vessels and developing local business to a corresponding extent.

At all these harbors there were before improvement bars and shoals with 2, 3, and 4 feet of water. New channels of 12 feet at low water are now available.

ROCKLAND HARBOR, MAINE.

(Page 147.)

First appropriation, 1880. The project adopted for this improvement consists in the construction of two breakwaters, one from Jameson Point, the other from South Ledge, the estimated cost of which is \$550,000.

The breakwater at Jameson Point has been undertaken first. Even in its present very incomplete condition it has shown its value by vessels having already taken advantage of it for refuge.

A breakwater at Owl's Head (page 145), 5 miles south of Rockland, was commenced under appropriation of 1852, but never completed. This new one at Rockland, a much better locality, will advantageously take its place. This harbor is situated at the entrance of all the thoroughfares leading to important ports to the east of it, which send out during the year thousands of vessels loaded with valuable cargoes.

July 1, 1882, amount available	\$127 20
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
	40,127 20
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	36,665 63
	<hr/>
July 1, 1883, amount available	3,461 57

KENNEBEC RIVER, MAINE.

(Page 143.)

Small appropriations for the improvement of this river were made at intervals between the years 1827 and 1852. Work of improvement was resumed in 1866. The depth of water has been increased from 2 feet to 10 feet at mean low water from Richmond to Gardiner, and thence 6½ feet at mean low water to Augusta.

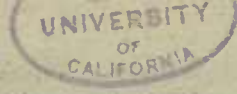
The ice business on this river, which is of great importance, has been largely increased and facilitated by this improvement.

RICHMOND HARBOR, MAINE.

(Page 146.)

First appropriation, 1881. The appropriation of 1882 will complete the work projected.

The work is intended for the maintenance of a depth of 10 feet at mean low water to Rich-



APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 3

mond, and to enable sea-going vessels of a larger class to engage in the transportation of ice, a business of increasing importance.

July 1, 1882, amount available	\$6,531 03
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	16,531 03
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	16,531 03

CATHANCE RIVER, MAINE.

(Page 143.)

First appropriation, 1880. The principal obstruction to navigation is at the outer bar, where the channel of the river enters the Kennebec, where there was but 6 feet at mean low water. Owing to the shifting character of this bar, it is not believed that any work, unless at a cost too great to be warranted, would effect a permanent improvement of the channel. Two other bars lying between this and the mouth of the Cathance River can be more effectually improved. Dredging on the outer bar has been completed to the extent projected, a depth of 10 feet at mean low water, and work is in progress on the other bars.

The interest is local; and the improvement thus far has resulted in but little benefit to commerce.

July 1, 1882, amount available	\$58 67
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,058 67
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$2,723 85
July 1, 1883, outstanding liabilities	689 52
	<hr/>
	3,413 37
July 1, 1883, amount available	1,645 30

"GUT" OPPOSITE BATH, MAINE.

(Page 143.)

This is a part of Back River, a tidal river 9 miles in length connecting Kennebec River at Bath with the tidewaters of Sheepscot Bay, and affords a short communication between the Kennebec and towns on or near the waters of the Sheepscot. The navigation here was much improved with appropriations made in 1870, 1871. Additional appropriations have been made since 1878, and the projected improvement is now nearly completed, and a navigation opened of not less than 11 feet at mean low water.

The commerce benefited is that of the collection district of Bath, in which in 1881 there were departures, 1,945 vessels, arrivals 1,915; vessels built 55, of 36,334 tons; 800,000 tons of ice shipped; 1,600,000 feet of lumber shipped.

July 1, 1882, amount available	\$2,981 75
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	2,981 75

ROYALS RIVER, MAINE.

(Page 147.)

First appropriation, 1871. The projected improvement, completed in 1873, increased the depth to Yarmouth from 1 foot at mean low water to 5 feet, greatly benefiting navigation.

The principal business of Yarmouth is ship-building, it being one of the largest ship-building towns in Maine.

The estimated value of its commerce, at the time of beginning the improvement, was \$1,523,500 annually. No recent statistics are at hand.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$1,594 23
July 1, 1883, outstanding liabilities	324 80
	<hr/>
	1,919 03
July 1, 1883, amount available	8,080 97

PORTLAND HARBOR, MAINE.

(Page 146.)

A breakwater on Stamford's Ledge for the protection of the inner harbor was partly built with appropriations of 1836, 1837, and 1838. The appropriations of 1866 and since that date have been applied to the completion of the breakwater and to dredging to 20 feet at mean low water of bars and shoal ground in the harbor, where there was originally on occasional shoal spots but 4 feet.

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The breakwater answers well the purposes of its construction, and the dredging, which is still in progress, has had a marked effect in increasing the facility of access of large steam and sail vessels, and the whole improvement is of decided benefit to commerce.

In 1881, value of exports, \$11,907,671; imports, \$10,410,384.

July 1, 1882, amount available.....	\$1,181 46
Amount appropriated by act passed August 2, 1882.....	35,000 00
	<hr/> 36,181 46
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$20,336 28
July 1, 1883, outstanding liabilities	5,150 80
	<hr/> 25,487 08
July 1, 1883, amount available.....	10,694 38

RICHMOND ISLAND HARBOR, MAINE.

(Page 147.)

A harbor of refuge has been formed here by a rubble-stone breakwater, connecting the island with the mainland, and has considerably increased the shelter for vessels. The harbor formed by the breakwater affords safe anchorage and good holding-ground for vessels of the largest class with the wind from any point except the southwest.

SACO RIVER, MAINE.

(Page 147.)

First appropriations, 1824 and 1827. Work resumed in 1866 and finished in 1874.

The navigable capacity of the stream has not been changed, but the breakwater built at the entrance to the rivers and piers along the channel have materially increased the facilities of navigation.

KENNEBUNK RIVER, MAINE.

(Page 144.)

Appropriations made at intervals between the years 1829 and 1852. Work resumed with appropriation of 1870 and finished in 1881. The piers built in the river have improved the channel, and the dredging at several points has increased the depth 5 feet.

The improvement of the river has been of material advantage to the ship-building interest centered here.

July 1, 1882, amount available.....	\$1,028 85
July 1, 1883, amount available.....	1,028 85

WELLS HARBOR, MAINE.

(Page 148.)

The improvement in this harbor has consisted in the repair of an old Government pier built thirty or forty years ago for the purpose of straightening and deepening the channel over the bar at the entrance to the harbor. The work was completed in 1873, and has somewhat increased the facilities of access to the harbor.

The commerce of the place is small and unimportant.

COBSCOOK BAY, MAINE.

(Page 143.)

The appropriation of 1852 was expended in the removal of rocks obstructing navigation near Fall's Island to the depth of mean low water, but was insufficient to complete the work, having left several rocks whose removal was requisite to make navigation good.

PISCATAQUA RIVER, MAINE.

(Page 146.)

The appropriation of 1828 was expended in removing obstructions in the Berwick branch of the river. The nature and extent of the work done upon this improvement is not known.

LAKE WINIPISSIOGEE, NEW HAMPSHIRE.

(Page 173.)

First appropriation, 1880. The depth at the outlet of the lake has been increased from 4 feet to 8 feet by dredging.

The improvement has benefited three or four steamers employed mainly for summer travel.

This lake and its tributaries lie wholly in the State of New Hampshire, their waters forming the chief source of the Merrimac River. A dam built at its outlet forms a reservoir of these waters which is under control of an incorporated company by which the water-power is regulated and supplied to factories along the Merrimac River below.

It does not form by itself, or by its connection with other waters, a continued highway over which commerce is, or may be carried on with other States, and is, therefore, not navigable within the legal definition of the word "navigable," as defined by the Supreme Court of the United States.

July 1, 1882, amount available	\$3,266 05
July 1, 1883, amount expended during the fiscal year exclusive of outstanding liabilities July 1, 1882.....	3,266 05

LAMPREY RIVER, NEW HAMPSHIRE.

(Page 172.)

First appropriation, 1881. By dredging and the removal of rocks and ledges, access to the wharves at New Market have been much improved, and the considerable business of the place facilitated and increased. Still greater benefits are anticipated from the completion of the improvement so as to give a depth of 11½ feet at high water, an increase of 7½ feet over the shoalest part before improvement.

July 1, 1882, amount available	\$5,674 75
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	15,674 75
July 1, 1883, amount expended during the fiscal year, exclusive of outstanding liabilities July 1, 1882.....	15,366 33
	<hr/>
July 1, 1883, amount available.....	308 42

EXETER RIVER, NEW HAMPSHIRE.

(Page 172.)

First appropriation, 1880. The work projected for the improvement of this river has been completed.

The facilities for navigation have been much increased by the increased depth and direct channel gained in the river from 7½ to 10 feet in depth.

The manufacturing towns of South New Market and Exeter have been much benefited.

COCHECO RIVER, NEW HAMPSHIRE.

(Page 172.)

Present improvement begun with appropriation of 1871.

By the removal of ledges, bowlders, &c., a depth of 4 feet at mean low water has been obtained where there was scarcely over 1 foot.

This improved access to the wharves at Dover has given a great impetus to business, which the completion of the channel, for which provision is made in act of August 2, 1882, will still further aid.

Amount appropriated by act passed August 2, 1882.....	\$28,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$8,757 44
July 1, 1883, outstanding liabilities	1,999 40
	<hr/>
	10,756 84
July 1, 1883, amount available.....	17,243 16

PORTSMOUTH HARBOR, NEW HAMPSHIRE.

(Page 173.)

An appropriation was made for this harbor and other purposes in 1822, which was in part expended in the erection of a pier on "Sunken Ledge." The present work was begun with the appropriation of 1879.

This is the only outlet of the navigable rivers along the coast of New Hampshire. The United States navy-yard at Kittery, Me., is also situated here.

The accessibility and depth of water of this harbor give to it a special value, the only difficulty to its navigation and safety being caused by sunken ledges and by its tidal currents, which tend to force vessels upon dangerous projecting points and from which numerous serious accidents have occurred and are still liable to occur to United States vessels and others frequenting the harbor.

The improvements projected and in progress will be of very decided benefit to commerce, and are enhanced by the great value of the harbor as a naval station.

July 1, 1882, amount available	\$30,419 14
Amount appropriated by act passed August 2, 1882	17,000 00
	<hr/>
	47,419 14
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$17,988 04
July 1, 1883, outstanding liabilities	1,230 00
	<hr/>
	19,218 04
July 1, 1883, amount available	28,201 10

MERRIMAC RIVER, MASSACHUSETTS.

(Page 154.)

The appropriations from 1828 to 1834, inclusive, were expended in the harbor of Newburyport on a breakwater at the mouth of the river.

The present improvement of the river was begun with the appropriation of 1870. Before improvement the channel of the river was narrow, crooked, and obstructed by bowlders, shoals, and ledges. A draft of 9 feet at mean low water, or 16½ feet at mean high water, can now be carried 7 miles above Newburyport; 12 feet at high water for 7 miles further to Haverhill, and 10 feet thence to the Mitchell's Falls; and at low stages 4 feet can be carried through the falls as far as Lawrence, 6 miles.

Seven incorporated cities and the largest mills in New England are benefited by this improvement.

July 1, 1882, amount available	\$3,353 79
Amount appropriated by act passed August 2, 1882	9,000 00
	<hr/> 12,353 79
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$7,673 88
July 1, 1883, outstanding liabilities	350 00
	<hr/> 8,023 88
July 1, 1883, amount available	4,329 91

NEWBURYPORT HARBOR, MASSACHUSETTS.

(Page 155.)

The appropriations from 1828 to 1834, inclusive, were expended in removing sand bars and building, and repairs of a breakwater. Those from 1870 to 1880 in the removal of rocks and other obstructions to navigation. The depth at low water over the bar was 7 feet.

The present improvement was begun in 1881, and is intended to create a permanent channel at the outer bar of not less than 17 feet at mean low or 24½ feet at mean high water, by means of jetties. The depth of the bar has already been increased to 9½ feet at mean low water by the partial construction of one of the jetties.

This improvement, in connection with that of Merrimac River, is in the interest of the largest manufactories in New England.

July 1, 1882, amount available	\$45,438 77
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/> 85,438 77
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$38,861 40
July 1, 1883, outstanding liabilities	2,682 69
	<hr/> 41,544 09
July 1, 1883, amount available	43,894 68

SALEM HARBOR, MASSACHUSETTS.

(Page 156.)

First appropriation, 1873. Before improvement an average depth of 1 foot only could be carried at mean low water to the wharves at the mouth of South River. There is now a channel 300 feet wide and 8 feet deep at mean low water, or 17 feet at high water. The benefit to commerce is the increase of the navigable capacity of the harbor.

SANDY BAY, MASSACHUSETTS.

(Page 157.)

The appropriations of 1836, 1837, and 1838 were applied to the construction of a breakwater 800 feet long, extending eastwardly from the western points of the harbor, to protect it from northerly winds. The work was reported as not only of great advantage to the inhabitants of Sandy Bay (now Rockport), but also a harbor of refuge for coasters, being accessible at all times of tide.

GLOUCESTER HARBOR, MASSACHUSETTS.

(Page 153.)

The appropriation of 1872 was expended in the removal of rocks and ledges in the inner harbor, by which the movement of vessels to and from the wharves and anchorages have been much facilitated, with benefit to the commerce of the place. The annual value of produce of the fisheries is over \$3,000,000. This also is an important harbor of refuge for fishermen.

MARBLEHEAD HARBOR, MASSACHUSETTS.

(Page 154.)

With the appropriation of 1852 an existing sea wall at this place was fully repaired through its whole length.

LYNN HARBOR, MASSACHUSETTS.

(Page —.)

First appropriation, 1882. A survey of this harbor has been made, and the project for its improvement is under consideration.

Amount appropriated by act passed August 2, 1882.....	\$60,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	2,138 07
July 1, 1883, amount available	57,861 93

MALDEN RIVER, MASSACHUSETTS.

(Page —.)

First appropriation, 1882. The natural channel is crooked and barely sufficient for vessels drawing 7 feet. The object of the improvement is to straighten, widen, and deepen the channel by dredging so as to enable vessels drawing 10 feet to ascend as far as Malden at high tide.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$1,202 33
July 1, 1883, outstanding liabilities	108 30
	1,310 63
July 1, 1883, amount available.....	8,689 37

BOSTON HARBOR, MASSACHUSETTS.

(Page 151.)

The greater part of the sums appropriated and allotted for this harbor since 1828 has been successfully expended for its preservation rather than for the increase of its navigable capacity, but at the same time the depth of water, from the entrance of the harbor to the wharves at Boston, has been increased from 18 to 23 feet at mean low water, with a least width of 600 feet. The depths in several channels tributary to the harbor have also been proportionally increased.

The preservation of headlands and islands has secured shelter to roadsteads and protected the channels against encroachments.

For the year 1881, value of importations, \$64,716,022; value of exportations, \$70,408,879.

July 1, 1882, amount available.....	\$68,662 63
Amount appropriated by act passed August 2, 1882	95,500 00
	165,162 63
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$46,318 50
July 1, 1883, outstanding liabilities	8,042 12
	54,360 62
July 1, 1883, amount available	110,802 01

SCITUATE HARBOR, MASSACHUSETTS.

(Page 157.)

The object of this improvement, begun in 1881, is to make a harbor of refuge for vessels in easterly storms. The design is to build two breakwaters from the projecting points at the entrance to this harbor and to dredge the space within, as well as the channel of entrance, to from 10 to 15 feet at mean low water, the rise of tide being 9 feet.

This harbor, when completed, must prove of undoubted benefit to vessels of all classes trading to Boston.

July 1, 1882, amount available	\$203 54
Amount appropriated by act passed August 2, 1882.....	10,000 00
	10,203 54
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	10,079 91
July 1, 1883, amount available.....	123 63

PLYMOUTH HARBOR, MASSACHUSETTS.

(Page 155.)

Appropriations for this harbor were made at intervals between the years 1824 and 1838, and one also in 1852. These were all expended for the protection and preservation of the beach upon which the harbor depends for its only shelter in easterly storms.

The appropriations since 1866 have been expended in repairs to the works previously constructed and in their completion on a more permanent plan, and also in the completion of a channel 100 feet wide and 8 feet deep to the wharves of Plymouth.

8 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The total value of foreign and domestic imports and exports (by water) of the port of Plymouth for the year ending December 31, 1881, is stated by the collector of customs to have been \$1,439,306.

July 1, 1882, amount available	\$89 67
Amount appropriated by act passed August 2, 1882.....	14,000 00
	<hr/>
	14,089 67
July 1, 1883, amount expended during the fiscal year, exclusive of outstanding liabilities July 1, 1882.....	12,968 53
	<hr/>
July 1, 1883, amount available.....	1,121 14

PROVINCETOWN HARBOR, MASSACHUSETTS.

(Page 156.)

This is one of the most important harbors of refuge on the Atlantic coast. The appropriations made from 1826 to 1882 have been expended with the object of preserving the sand beaches inclosing the harbor, and thereby the harbor itself, and have been applied with success. The appropriation of 1882 will be expended in the extension of the stone bulkhead on Long Point, which will complete all work projected.

The commerce of the New England States is benefited by the maintenance of this harbor.

July 1, 1882, amount available	\$1,556 35
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	6,556 35
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$2,920 86
July 1, 1883, outstanding liabilities.....	74 88
	<hr/>
	2,995 74
July 1, 1883, amount available	3,560 61

HYANNIS HARBOR, MASSACHUSETTS.

(Page 153.)

This harbor is sheltered by a breakwater built with appropriations made between the years 1828 and 1838. The appropriation of 1852 was spent in repairs. Those made since 1870 were expended in repairs and strengthening the work.

The harbor is accessible at times of mean low water to vessels drawing 16 feet, or at high water 20 feet. Its chief importance to general commerce is as a harbor of refuge.

The number of vessels seeking shelter here in 1878 was about 1,400.

July 1, 1882, amount available	\$278 63
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$18 00
July 1, 1883, outstanding liabilities.....	75
	<hr/>
	18 75
July 1, 1883, amount available	259 88

NANTUCKET HARBOR, MASSACHUSETTS.

(Page 154.)

The appropriations of 1829, 1831, and 1832 were expended in dredging a channel through the bar. The work resulted in no benefit to commerce or increase of navigable capacity. The work of improvement was resumed in 1880, at which time the least depth of water on the bar was 6 feet at low water.

No marked benefit to commerce or increase of navigable capacity is anticipated until the work now in progress has been further advanced.

July 1, 1882, amount available	\$45,792 15
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	70,792 15
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$22,509 73
July 1, 1883, outstanding liabilities.....	14,051 42
	<hr/>
	36,561 15
July 1, 1883, amount available	34,231 00

BASS RIVER, MASSACHUSETTS.

(Page 151.)

The appropriations of 1836 and 1838 were expended in the construction of a breakwater to secure a larger space for anchorage in the harbor. Two hundred feet of the projected length of 350 feet were built, affording good shelter to vessels navigating Vineyard Sound.

EDGARTOWN HARBOR, MASSACHUSETTS.

(Page 153.)

The appropriations of 1826 and 1829 were expended in surveys and the construction of a dike, which proved beneficial in arresting the drift of sand into the harbor. That of 1872 was applied

to reopening an outlet into the ocean, with the expectation of thereby maintaining the entrance to the harbor in good navigable condition. The opening was successfully made, but did not prove permanent.

No benefit to commerce resulted from the expenditure.

WOOD'S HOLL HARBOR, MASSACHUSETTS.

(Page 158.)

The first appropriation, that of 1852, was expended in building a breakwater, which proved beneficial by arresting an influx of sand into the harbor.

With the appropriation of 1879 the depth of water at entrance was increased from 7½ to 10 feet, and a direct channel made 120 feet wide and 9 feet deep where none previously existed, by which the important commerce of Buzzard's Bay has been greatly benefited.

The river and harbor act of 1882 makes appropriation for the construction of a harbor of refuge.

July 1, 1882, amount available.....	\$567 07
Amount appropriated by act passed August 2, 1882.....	52,000 00
	<hr/> 52,567 07
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$2,139 73
July 1, 1883, outstanding liabilities	436 24
	<hr/> 2,575 97
July 1, 1883, amount available,	49,991 10

NEW BEDFORD HARBOR, MASSACHUSETTS.

(Page 155.)

The appropriation of 1836 was expended in removing obstructions, and in dredging, by which an increase of 2 feet in the channel was obtained. The appropriation of 1852 was for a survey of this harbor and of Taunton River.

The appropriations of 1875 and 1876 were expended in dredging, and resulted in an increase of depth of channel from 12½ to 15 feet in a width of 200 feet, from deep water to the New Bedford wharves, by which they were made accessible to whalers of the largest class.

TAUNTON RIVER, MASSACHUSETTS.

(Page 157.)

The expenditure of the appropriations made from 1870 to 1879 resulted in increasing the navigable capacity of the stream from 4½ feet to 9 feet at mean high water, and created a very marked increase of commerce. With the appropriations of 1880, 1881, and 1882 it is designed to increase the width of the channel, and also the depth from 9 to 11 feet, to head of navigation. The work is about half finished. No statistics of commerce.

July 1, 1882, amount available	\$23,702 36
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/> 48,702 36
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$20,723 12
July 1, 1883, outstanding liabilities	7,040 89
	<hr/> 27,764 01
July 1, 1883, amount available.....	20,938 35

DUXBURY HARBOR, MASSACHUSETTS.

(Page 153.)

The improvement projected for this harbor consisted in straightening and widening the south channel so as to obtain a width of 200 feet for a depth of 8 feet at mean low water. The work was completed in 1874. This increase of facilities of navigation has been of benefit to the commerce of the port.

WELLFLEET HARBOR, MASSACHUSETTS.

(Page 158.)

The appropriation of 1872 was expended in the removal of the sunken rocks at the entrance to the harbor. The work was finished in 1874, and navigation benefited thereby.

WAREHAM HARBOR, MASSACHUSETTS.

(Page 157.)

Before improvement the ruling depth in the harbor was about 7 feet at mean low water, in a narrow and very crooked channel. The improvement made, with the amount expended prior to June 30, 1880, has enabled vessels drawing 13 feet to reach the wharves at high water.

Further improvement of this harbor is in progress with appropriations made subsequent to the above date.

10 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The annual value of merchandise received and shipped by water at the port of Wareham is reported to be at this time \$1,101,300.

July 1, 1882, amount available.....	\$397 45
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/> 5,397 45
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$3,020 13
July 1, 1883, outstanding liabilities	386 06
	<hr/> 3,406 19
July 1, 1883, amount available	1,991 26

FALL RIVER, MASSACHUSETTS.

(Page 153.)

With the appropriations of 1874, 1875, and 1876 the navigable capacity of Fall River Harbor has been increased from 6 to 12 feet at mean low water by removing obstructions of bowlders and bars. Much larger vessels now enter the harbor.

This place is of the highest rank in the extent of its cotton manufactures.

CHURCH'S COVE, RHODE ISLAND.

(Page 203.)

An appropriation was made in 1827 for a survey here. The appropriations of 1836 and 1838 were applied to the construction of a breakwater for the shelter of vessels in stress of weather passing from Vineyard Sound to New York. The breakwater was never finished, and has suffered from want of means for its preservation.

PAWTUCKET RIVER, RHODE ISLAND.

(Page 204.)

Before improvement, in 1867, the channel of approach to the wharves at Pawtucket had a least depth of $4\frac{1}{2}$ feet at mean low water. There is now a channel of 75 feet wide and 7 feet deep at mean low water, which has led to a decided increase of the commerce of Pawtucket, a town of 30,000 inhabitants, largely engaged in manufactures.

July 1, 1882, amount available.....	\$529 58
July 1, 1883, amount available.....	529 58

PROVIDENCE RIVER AND NARRAGANSETT BAY, RHODE ISLAND.

(Page 205.)

The first appropriation of 1852 was applied to the removal of a shoal at the junction of Seekonk and Providence rivers, upon which there was an available depth of only $4\frac{1}{2}$ feet at low water. The appropriation of 1870, and subsequent ones to date, have been expended in the gradual increase of the depth and width of the channel of approach to Providence, so that it can now be reached at high tide by vessels drawing 25 feet.

There was a balance remaining on hand of \$128,464 on July 1, 1882, which will be expended towards deepening the channel to 25 feet at low water.

The benefit to commerce has been an increase of the annual tonnage to and from the port to about 4,000,000 tons.

July 1, 1882, amount available.....	\$3,464 49
Amount appropriated by act passed August 2, 1882	125,000 00
	<hr/> 128,464 49
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$75,378 67
July 1, 1883, outstanding liabilities	16,921 84
	<hr/> 92,300 51
July 1, 1883, amount available	36,163 98

POTOWOMUT RIVER, RHODE ISLAND.

(Page 204.)

The appropriation of 1881 was applied to increasing the depth of water on the bar at the entrance of the stream from $2\frac{1}{2}$ to 5 feet.

The benefit to commerce is local.

NEWPORT HARBOR, RHODE ISLAND.

(Page 204.)

In 1872, before improvement, the city wharves could not be reached at low tide by vessels drawing more than 8 feet. This depth has been increased to 12 feet. The anchorage capacity of

the harbor has also been increased about 16 acres, and in depth from 8 feet at mean low water to from 11 to 13 feet. It is one of the most important harbors on the coast.

July 1, 1882, amount available	\$8,041 05
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/> 28,041 05
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$23,552 24
July 1, 1883, outstanding liabilities.....	4,130 04
	<hr/> 27,682 28
July 1, 1883, amount available	358 77

WICKFORD HARBOR, RHODE ISLAND.

(Page 205.)

The appropriations of 1873 and 1874 were expended in increasing the depth of channel into the harbor from 6½ to 9½ feet at mean low water.

This improvement is in the interest of travel between Newport and New York.

BLOCK ISLAND HARBOR, RHODE ISLAND.

(Page 203.)

Between 1870 and 1879 an artificial harbor has been built where none previously existed. In active seasons of the year it is crowded to its full capacity with coasters and fishermen. The local business has also materially increased. The improvement was a much-needed one, and has proved of benefit to commerce.

July 1, 1882, amount available	\$65 14
Amount appropriated by act passed August 2, 1882.....	19,000 00
	<hr/> 19,065 14
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$3,244 85
July 1, 1883, outstanding liabilities.....	1,716 62
	<hr/> 4,961 47
July 1, 1883, amount available	14,103 67

PAWCATUCK RIVER, RHODE ISLAND AND CONNECTICUT.

(Page 257.)

First appropriation, 1871. Improvement completed in 1875, by the creation of a channel 75 feet wide and 5½ feet deep at mean low water up to Westerly, Rhode Island, and Pawcatuck, Connecticut. The least depth before improvement was 2½ feet at low water. The reduction of freight from New York to the above important manufacturing towns is said to have been by reason of this improvement from 25 to 75 cents per ton.

LITTLE NARRAGANSETT BAY, RHODE ISLAND AND CONNECTICUT.

(Page 230.)

Pawcatuck River can only be approached through this bay. Its improvement, begun in 1878, has so far resulted in a channel 7½ feet deep at mean low water, where the depth was but 4½ feet at low water, and is of importance to the manufacturing towns on the Pawcatuck, and to Watch Hill, a place of summer resort.

July 1, 1882, amount available	\$277 88
Amount appropriated by act passed August 2, 1882.....	6,000 00
	<hr/> 6,277 88
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$4,942 84
July 1, 1883, outstanding liabilities.....	199 20
	<hr/> 5,142 04
July 1, 1883, amount available	1,135 84

CONNECTICUT RIVER, MASSACHUSETTS AND CONNECTICUT.

(Page 122.)

Below Hartford.—The appropriation of 1836 was expended in dredging on the bar at the mouth of the river, but owing to want of appropriation from that date to 1870 no permanent benefit resulted from the work.

With the appropriations since 1870 the results have been a steady improvement of the navigation at Saybrook Bar, where jetties now nearly completed have already increased the low-water depth from 6 to 8½ feet. From the bar up stream the dredging of shoals is, and must be, annually

12 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

continued, in order to maintain 9 feet at low water to Hartford, until a permanent improvement is completed.

July 1, 1882, amount available.....	\$3,363 00
Amount appropriated by act passed August 2, 1882.....	45,000 00
	<hr/> 53,363 00
July 1, 1883, amount expended during fiscal year, exclusive of outstand- ing liabilities July 1, 1882.....	\$14,619 56
July 1, 1883, outstanding liabilities.....	6,228 97
	<hr/> 20,848 53
July 1, 1883, amount available	32,514 47

Above Hartford and below Holyoke, Massachusetts.—The depth of water on the numerous bars below Enfield Falls has been increased by dredging and the building of wing dams from 1 foot before improvement to 3 feet at low water.

No statistics of commerce at hand.

HARTFORD, CONNECTICUT, AND HOLYOKE, MASSACHUSETTS.

July 1, 1882, amount available	\$13,669 80
July 1, 1883, amount available	13,669 80
Amount (estimated) required for completion of existing project.....	1,322,805 00

ABOVE HARTFORD AND BELOW ENFIELD FALLS.

July 1, 1882, amount available	\$1,912 66
July 1, 1883, amount available	1,912 66

ON OR ABOVE ENFIELD FALLS, AND BELOW HOLYOKE, MASSACHUSETTS.

July 1, 1882, amount available.....	\$10,702 92
July 1, 1883, amount available	10,702 92

STONINGTON HARBOR, CONNECTICUT.

(Page 125.)

In 1827, before improvement, the 12-foot navigable channel was narrow and did not extend to the town wharves, and the harbor was completely exposed to southerly storms.

At present the 12-foot channel extends close to the wharves and is of sufficient width to be readily used. The harbor is effectually sheltered from the southwest, and upon the completion of the breakwater now under construction will be protected from the south and southeast.

This shelter has already proved of advantage to vessels.

July 1, 1882, amount available	\$680 44
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/> 25,680 44
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$15,540 46
July 1, 1883, outstanding liabilities.....	4,025 36
	<hr/> 19,565 82
July 1, 1883, amount available	6,114 62

NEW LONDON HARBOR, CONNECTICUT.

(Page 124.)

In 1880 the principal wharf of the place was separated from the main channel by a shoal. This has been in part removed, and has facilitated the movements of freight steamers.

July 1, 1882, amount available	\$158 89
Amount appropriated by act passed August 2, 1882.....	9,000 00
	<hr/> 9,158 89
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	9,075 01
July 1, 1883, amount available.....	83 88

THAMES RIVER, CONNECTICUT.

(Page 125.)

In 1829, before improvement, the available depth of the river for 3 miles below Norwich was less than 5 feet at low water. The present available depth is 10½ feet, with the expectation of a still further increase upon the completion of the works now projected.

July 1, 1882, amount available	\$28,974 72
Amount appropriated by act passed August 2, 1882.....	35,000 00
	<hr/> 63,974 72
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$21,438 40
July 1, 1883, outstanding liabilities.....	2,114 66
	<hr/> 23,553 06
July 1, 1883, amount available.....	40,421 66

CLINTON HARBOR, CONNECTICUT.

(Page —.)

First appropriation, 1882. Formerly there was 8 feet depth at low water in the entrance to this channel, which has since shoaled to 4 feet, owing to a break in the beach. It is proposed to close this with the amount available by a dike of riprap stone, so as to regain the original depth by restoring the full tidal flow.

Amount appropriated by act passed August 2, 1882.....	\$3,000 00
July 1, 1883, amount available.....	3,000 00

NEW HAVEN HARBOR, CONNECTICUT.

(Page 123.)

Before improvement, in 1867, the low-water channel of this harbor had an available depth of about 7 feet, and the entrance to the harbor was obstructed by a number of sunken rocks.

There is now a channel of 16 feet, 400 feet wide, except over Fort Hale Bar, not yet completed, which is constantly used by vessels that twelve years ago would have been obliged to wait for high tide, or could not have entered without lightering. The available area of the harbor has been largely increased.

July 1, 1882, amount available	\$3,464 96
Amount appropriated by act passed August 2, 1882	30,000 00
	<hr/>
	33,464 96
July 4, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$2,265 45
July 1, 1883, outstanding liabilities	2,157 75
	<hr/>
	4,423 20
July 1, 1883, amount available	29,041 76

BREAKWATER AT NEW HAVEN, CONNECTICUT.

(Page 123.)

This was projected in 1879 for the purpose of forming a harbor of refuge. The work is in progress.

July 1, 1882, amount available	\$722 34
Amount appropriated by act passed August 2, 1882	60,000 00
	<hr/>
	60,722 34
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$13,314 88
July 1, 1883, outstanding liabilities	5,350 16
	<hr/>
	18,665 04
July 1, 1883, amount available	42,057 30

MILFORD HARBOR, CONNECTICUT.

(Page 123.)

Before improvement, in 1874, this harbor had an available depth of 2 feet and less. There is now an available depth of 4 feet, with a width of from 60 to 100 feet in the channel.

July 1, 1882, amount available	\$76 19
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,076 19
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$18 13
July 1, 1883, outstanding liabilities	1,664 95
	<hr/>
	1,683 08
July 1, 1883, amount available	3,393 11

HOUSATONIC RIVER, CONNECTICUT.

(Page 123.)

In 1871, before improvement, the river had an available depth of 7 feet at low water below Derby, with five long shoals upon which there was a depth of from 3½ to 5 feet.

The channel has been straightened and an available depth secured and maintained through the shoals, so that such vessels as can cross the bar at the mouth can now ascend without detention.

July 1, 1882, amount available	\$115 40
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	2,115 40
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	118 40
July 1, 1883, amount available	1,997 00

14 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

BRIDGEPORT HARBOR, CONNECTICUT.

(Page 121.)

In 1835, before improvement, this harbor had an available depth at mean low water of about 5 feet on the bars, and about 7 feet thence to the town.

There is now a channel to the town 12 feet deep and from 200 to 340 feet wide, which is in constant use, and is frequently sought by passing vessels as a harbor of refuge. The available harbor capacity has been largely increased.

July 1, 1882, amount available.....	\$360 74
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	10,360 74
July 1, 1882.....	9,533 51
	<hr/>
July 1, 1883, amount available.....	827 23

SOUTHPORT HARBOR, CONNECTICUT.

(Pages 123 and 124.)

The navigation of this harbor, formerly known as Mill River, was almost impracticable, the channel being nearly bare at low water. The appropriations of 1829 and 1832 were applied to the construction of a breakwater and dike, and to the excavation of the channel. This work secured a channel of moderate width and a depth of 2 feet at low water. The channel has since been deepened to 4 feet and made 100 feet wide.

July 1, 1882, amount available.....	\$155 85
Amount appropriated by act passed August 2, 1882.....	3,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	3,155 85
July 1, 1882.....	2,841 78
	<hr/>
July 1, 1883, amount available.....	314 07

BLACK ROCK HARBOR, FAIRWEATHER ISLAND, CONNECTICUT.

(Page —.)

The sea-wall built here with the appropriations of \$10,000 in 1836 and \$11,500 in 1838, has been the means of preserving one of the best harbors of refuge on Long Island Sound.

WESTPORT HARBOR AND CEDAR POINT, CONNECTICUT.

(Pages 122 and 126.)

In 1836-'37 a sea-wall was built on Cedar Point and a canal cut through Great Marsh, which have resulted in preserving the harbor from threatened influx of sand, and shortened, by means of the canal, the course westward by about 4 miles, and has been of benefit to navigation.

NORWALK HARBOR, CONNECTICUT.

(Page 124.)

In 1871, before improvement, the available low-water depth to South Norwalk was about 5 feet; thence to Norwalk not more than 1½ feet.

The improvement has secured and maintained a channel 100 feet wide and nearly 8 feet deep to South Norwalk, and from 60 to 80 feet wide and 6 feet deep thence to Norwalk.

July 1, 1882, amount available.....	\$310 19
August 14, 1883, overpayment refunded.....	296 30
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	5,606 49
July 1, 1882.....	5,091 14
	<hr/>
July 1, 1883, amount available.....	515 35

HUNTINGTON HARBOR, NEW YORK.

(Page 182.)

In 1872, before improvement, the entrance to this harbor was obstructed by bowlders, and long flats prevented vessels from reaching nearer than 2,000 feet of the wharves of the town. These can now be reached through a channel of 8 feet in depth.

PORT JEFFERSON HARBOR, NEW YORK.

(Page 186.)

In 1871, before improvement, a bar existed just outside the entrance to this harbor, having a low-water depth of 3 to 3½ feet.

This entrance has been deepened to 8 feet at low water for a width of 100 feet, and the harbor is now accessible for local commerce and to passing vessels in stress of weather.

July 1, 1882, amount available.....	\$421 31
Amount appropriated by act passed August 2, 1882	8,000 00
	<hr/> 8,421 31
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$486 05
July 1, 1883, outstanding liabilities	5,273 08
	<hr/> 5,759 13
July 1, 1883, amount available.....	2,662 18

MAMARONECK HARBOR, NEW YORK.

(Page .)

First appropriation, 1882. This is a tidal inlet opening into a broad bay on the north shore of Long Island Sound. The available depth at mean low water is 5 feet half way up the inlet, but to the head of the harbor it is less than 1 foot. There are several rocks in and near the channel which have been the cause of numerous wrecks. The improvement contemplates the removal of the worst of these rocks, and dredging to 7 feet at low water half way up the inlet and 4 feet to the town.

This harbor is the port of a large and prosperous back country which would be much benefited by this improvement.

Amount appropriated by act passed August 2, 1882.....	\$15,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	78 60
July 1, 1883, amount available	<hr/> 14,921 40

GREENPORT HARBOR, NEW YORK.

(Page .)

First appropriation, 1882. This harbor is near the east end of Long Island. It is protected from storms of any quarter but the northeast. It is proposed to construct a breakwater for protection from that quarter, and to increase the sheltered area, which has much diminished owing to the erosion of a projecting point.

Number of vessels registered at Greenport in 1881, 263; tonnage, 16,271. Gross amount of the business of the place about \$2,000,000 in 1881.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$157 09
July 1, 1883, outstanding liabilities	71 55
	<hr/> 228 64
July 1, 1883, amount available	<hr/> 9,771 36

PECONIC RIVER, NEW YORK.

(Page 185.)

The available depth of channel to Riverhead was in 1871, before improvement, not over 1½ feet at low water.

The available depth is now 4 feet.

DREDGING MUD-BARS IN THE HUDSON RIVER OPPOSITE JERSEY CITY.

(Page 182.)

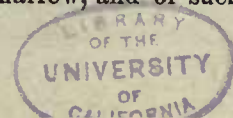
The appropriation of 1875 was expended in dredging a mud-bank which had formed opposite Jersey City to a depth of 25 feet at mean low water, but owing to the shape of the river shore above the point dredged, the benefit from the dredging was not of a permanent character.

HUDSON RIVER, NEW YORK.

(Page 181.)

Appropriations were made at intervals between the years 1834 and 1852 inclusive, and expended in construction of dikes, dams, and revetments, and in dredging. Work was resumed with the appropriation of 1864.

In 1866, 7½ feet could be carried at low water from New Baltimore to Albany, and from Albany to Troy 7.2 feet. The channels, however, were very crooked in places, very narrow, and of such difficult navigation that the grounding of boats was of ordinary occurrence.



16 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

June 30, 1880, the condition of the work was a navigable channel from New Baltimore to Albany of 9½ feet at low water, and from Albany to Troy of 8 feet. No survey or examination has since been made. No complaints of detention of vessels have been made.

July 1, 1882, amount available	\$46,790 35
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	56,790 35
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$3,390 83
July 1, 1883, outstanding liabilities	37,000 00
	<hr/>
	40,390 83
July 1, 1883, amount available.....	16,399 52

RONDOUT HARBOR, NEW YORK.

(Page 187.)

First appropriation, 1872. Before improvements, the channel from the creek to the channel of Hudson River had a depth of 9 feet at low water. There is now a channel 200 feet wide and 10 feet deep including therein a depth of 12 feet in a width of 100, and a depth of 13½ feet in a width of 50 feet. Amount of commerce benefited, \$70,000,000.

July 1, 1882, amount available	\$2,268 69
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	4,268 69
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	3,508 66
	<hr/>
July 1, 1883, amount available	760 03

REMOVING OBSTRUCTIONS IN EAST RIVER AND AT HELL GATE, NEW YORK.

(Page 180.)

The original condition of the channel was the existence of many large and dangerous rocky obstructions to navigation, having over them depths varying from 11 to 20 feet, and what added considerably to the danger from these reefs was the bend at right angles of the river at Hell Gate.

The first appropriation was in 1852. The present improvement was begun with the appropriation of 1868. The condition of the work at this time is the removal of Diamond, Coenties, Ways Reef, and Shelldrake, to the depth of 26 feet at mean low water; the breaking up of Heel Tap Rock, the tunneling and explosion of Hallett's Point, and the removal of *débris* to the depth of 26 feet; the tunneling of Flood Rock to the extent of 20,236 linear feet, and the removal therefrom of 72,116 cubic yards of stone, and 18,557 holes drilled for the final blast. The reef off the North Brother has also been removed to 26 feet at mean low water.

The amount of commerce and navigation benefited by the completion of this work is estimated at \$4,000,000 daily.

July 1, 1882, amount available	\$25,623 35
Received from sales of fuel.....	48 00
Amount appropriated by act passed August 2, 1882.....	200,000 00
	<hr/>
	225,671 35
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$186,526 30
July 1, 1883, outstanding liabilities.....	3,324 63
	<hr/>
	189,850 93
July 1, 1883, amount available	35,820 42

HARLEM RIVER, NEW YORK.

(Page 181.)

An allotment of \$11,000 was made from the appropriation of 1874 for Hell Gate, which, added to the appropriation of 1875, was expended in the removal of the reef lying off the foot of East One hundred and twenty-fifth street, New York City, from a depth of 9 feet to that of 14½ feet at mean low water, thereby giving great relief to the large number of steamers plying between Harlem and New York.

The object of the improvement to be made with the appropriation of 1878, and subsequent ones, is to connect the Hudson River and the East River with a 15-foot channel. The surveys have been completed and the lines of improvement mapped, but in consequence of the condition that these appropriations are not available until the right of way is secured to the United States free of cost, operations are deferred until this right of way is secured. The amount of commerce to be benefited by this work will be very large.

July 1, 1882, amount available	\$400,000
July 1, 1883, amount available	400,000

BUTTERMILK CHANNEL, NEW YORK.

(Page 177.)

First appropriation, 1880. This channel in its original condition was obstructed by a large shoal, with a least depth of 9½ feet at mean low water, which lay in the direct track of navigation and too near the wharves of Brooklyn for the safe passage of large vessels. The result of the improvement as far as it has progressed has been the removal of a part of the shoal next to the Brooklyn piers for 2,400 feet in length and 250 feet in width, thereby giving great relief to vessels going to the Brooklyn wharves. The amount of commerce benefited by the completion of this work is estimated at \$1,500,000 daily.

July 1, 1882, amount available	\$49,272 71
Amount appropriated by act passed August 2, 1882.....	60,000 00
	<hr/>
	109,272 71
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$48,435 57
July 1, 1883, outstanding liabilities.....	7,665 00
	<hr/>
	56,100 57
July 1, 1883, amount available	53,172 14

GOWANUS BAY CHANNEL, NEW YORK.

(Page 180.)

First appropriation, 1881. The original condition of the channel was inadequate for the navigation of vessels employed in the commerce of this district, the depth of water varying from 6.9 feet to 12.3 feet at mean low water. The work, as far as it has progressed, has resulted in a channel, by dredging, about 5,000 feet long, 100 feet wide, and 18 feet deep. The amount of commerce and navigation to be benefited is about \$5,000,000 annually.

July 1, 1882, amount available	\$9,970 03
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	29,970 03
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	10,094 34
July 1, 1883, amount available	19,875 69

ECHO HARBOR, NEW ROCHELLE, NEW YORK.

(Page 180.)

First appropriation, 1878. In the original condition of navigation there were two rocky obstructions, one exposed in part at low water, and the other with a least depth of 1 foot at mean low water. The work, as far as it has progressed, has been the removal of one of these rocks to a depth of 7 feet at mean low water, and of a portion of the other to a depth of 9 feet below mean low water. Amount of commerce to be benefited by the completion of this work, \$1,500,000 annually.

July 1, 1882, amount available	\$491 63
Amount appropriated by act passed August 2, 1882.....	3,000 00
	<hr/>
	3,491 63
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	125 26
July 1, 1883, amount available	3,366 37

NEW ROCHELLE HARBOR, NEW YORK.

(Page 180.)

First appropriation, 1881. The original condition of the channel was, that it was narrow and interspersed with sunken reefs of rocks which made it dangerous for navigation.

The work, as far as it has progressed, has been the dredging of a channel 1,500 feet long, 100 feet wide, and 6 feet deep at mean low water, and the removal of a rock at the mouth of the channel. No commerce directly benefited.

July 1, 1882, amount available	\$10,493 42
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	25,493 42
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$307 97
July 1, 1883, outstanding liabilities.....	9,000 00
	<hr/>
	9,307 97
July 1, 1883, amount available	16,185 45

PORT CHESTER HARBOR, NEW YORK.

(Page 186.)

First appropriation, 1872. Before improvement the channel was obstructed by two rocks, one with a depth over it of 5.7 feet at low water, and the other slightly projecting above the level of mean low water.

With the appropriation of 1872, this last rock has been removed to a depth of 9 feet at mean low water.

18 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

No work has yet been done with the appropriation of 1882. Amount of commerce to be benefited not reported.

July 1, 1882, amount available	\$1,950 00
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	16,950 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	25 00
	<hr/>
July 1, 1883, amount available	16,925 00
Amount (estimated) required for completion of existing project	16,632 00

RARITAN RIVER, NEW JERSEY.

(Page 175.)

The appropriations of 1836 and 1837 were expended in removing obstructions from the river at New Brunswick.

At the commencement of operations in 1879, the condition of navigation in the lower part of the river was a least depth of 6 to 7 feet at mean low water, and 7 to 8 feet at shoals as far up as New Brunswick.

The result of the improvement so far has been that by the construction of dikes and dredging a channel 12 feet deep at mean low water has been obtained at "the Stakes," except for a short distance where it has been dredged to 9 feet; the completion of a channel by dredging at "the Middle Ground," 5,300 feet long, 130 feet wide, and 12 feet deep at mean low water, and a channel 1,000 feet long, 134 feet wide, and 12 feet deep made by blasting at "White Heads."

The appropriation of 1882 will be expended in continuation of the rock blasting at this last point, and in dredging.

Amount of tonnage passing through the Delaware and Raritan Canal at New Brunswick from March 1, 1881, to January 1, 1882, 1,527,579 tons.

July 1, 1882, amount available	\$27,792 11
Received from sales of coal	90 00
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	52,882 11
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$34,923 90
July 1, 1883, outstanding liabilities.....	1,978 74
	<hr/>
	36,902 64
July 1, 1883, amount available.....	15,979 47

SOUTH RIVER, NEW JERSEY.

(Page 176.)

The appropriations of 1871 and 1873 were expended in deepening the canal or cut into Raritan River.

At the commencement of operations in 1881 there was a depth of only 3½ feet at the canal mouth, and a least depth of from 2 to 3 feet at men low water at various points up the river.

The available funds will be applied to diking and dredging in the canal and at its outlet for the purpose of obtaining a depth of 8 feet at mean low water. Amount of commerce to be benefited, \$3,000,000 annually.

July 1, 1882, amount available.....	\$45,261 37
Received from sales of coal	30 06
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	55,291 43
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$23,338 57
July 1, 1883, outstanding liabilities.....	28,032 12
	<hr/>
	51,370 69
July 1, 1883, amount available	3,920 74

FLUSHING BAY, NEW YORK.

(Page 180.)

Work of improvement begun in 1880. A channel 80 feet wide, 6 feet deep at mean low water, has been made from Long Island Sound into the creek at Flushing, with a branch channel of the same width to a dock on the Newtown side of the bay. Before improvement the least depth in channel was 3.9 feet at mean low water.

The work has been of special benefit to the town of Flushing and adjacent country.

The amount of commerce benefited by this improvement was estimated, in 1882, to be \$5,000,000 annually.

July 1, 1882, amount available.....	\$2,255 71
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	7,255 71
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	7,247 08
	<hr/>
July 1, 1883, amount available	8 63

PASSAIC RIVER ABOVE NEWARK, NEW JERSEY.

(Page 174.)

Improvement begun in 1872, at which time the ruling depth was about 3 feet; this has been increased to 6 feet at mean low water, with a channel from 60 to 75 feet in width from Belleville to Passaic, affording increased facilities for the transportation of heavy freight.

In 1877, the amount of commerce benefited was estimated at \$1,000,000; in 1882, at \$2,000,000.

July 1, 1882, amount available.....	\$2,452 62
Amount appropriated by act passed August 2, 1882.....	7,000 00
	<hr/>
	9,452 62
July 1, 1883, outstanding liabilities.....	53 50
	<hr/>
July 1, 1883, amount available.....	9,399 12

PASSAIC RIVER FROM PENNSYLVANIA RAILROAD BRIDGE TO ITS MOUTH.

(Page 174.)

Improvement begun in 1880. The depth at the bar at the mouth of the river has been increased from 7 to 10 feet, and that depth carried up, with a width of 200 feet, to a point 1 mile above.

The improvement thus far made has been of direct and important benefit to shipping and manufacturing interests centered at Newark. Twenty-two thousand vessels passed through the draw of the lowest bridge on the river in 1881.

July 1, 1882, amount available.....	\$9,929 82
Amount appropriated by act passed August 2, 1882	43,000 00
	<hr/>
	52,929 82
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities, July 1, 1882	\$21,068 87
July 1, 1883, outstanding liabilities.....	3,035 65
	<hr/>
	24,104 52
July 1, 1883, amount available	<hr/>
	28,825 30

CHANNEL BETWEEN STATEN ISLAND AND NEW JERSEY.

(Page 259.)

Improvement begun in 1874, at which time the least depth of water in channel was 10 feet at mean low water. This has been increased to 13 feet in a channel 200 feet wide, and 12 feet in a channel 340 feet wide.

This improvement, as far as made, is of great and increasing benefit to an extensive commerce.

For Elizabethport the trade in 1882 was, in coal, 3,225,000 tons; iron and other freight, 122,500 tons.

July 1, 1882, amount available.....	\$3,828 65
Amount appropriated by act passed August 2, 1882.....	40,000 00
	<hr/>
	43,828 65
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	42,033 27
	<hr/>
July 1, 1883, amount available.....	1,795 38

ICE BREAKER ON STATEN ISLAND, NEW YORK.

(Page 188.)

The object of the appropriation of 1836 was to provide a breakwater at the quarantine grounds to protect the public wharf and buildings from northeast gales. It was applied to building cut-stone piers, the spaces between which were occupied by piles. The work was not for the benefit of general commerce.

NEWARK BAY, NEW JERSEY.

(Page 174.)

The project adopted for the application of the appropriation of 1852, was to open a channel through the bar at the junction of the Passaic and Hackensack rivers, 100 feet in width, and of such depth, not exceeding 11½ feet, as the appropriation would secure. The funds were exhausted before the work of obtaining a suitable channel was accomplished, and during the long interval between this and the next appropriation in 1872, the cut made was obliterated.

No material benefit to commerce resulted.

SHREWSBURY RIVER, NEW JERSEY.

(Page 175.)

Work of improvement begun in 1871. Benefit to commerce has resulted from obtaining a depth of 6 feet at mean low water from the mouth to head of navigation on the North Branch, and for nearly the entire length of the main stem and South Branch, the depth before the improvement being only about 3 feet.

20 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The value of the commerce in Shrewsbury River and its branches was estimated to be, in 1870, \$1,175,100; in 1882, \$2,501,425.

July 1, 1882, amount available	\$19,507 01
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/>
	49,507 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$32,495 17
July 1, 1883, outstanding liabilities	4,056 78
	<hr/>
	36,551 95
July 1, 1883, amount available	12,955 06

LITTLE EGG HARBOR, NEW JERSEY.

(Page 174.)

The appropriations of 1836 and 1838 were expended for the preservation of Tucker's Island by the construction of jetties perpendicular to the shore, to arrest abrasion by the surf; these were eventually carried away by storms. Upon inspection in 1853, it was concluded not to repair them, as it was found that the abrasion they were designed to prevent had actually occurred without injury to the harbor. The appropriation of 1852, made for repairs, was not expended, but covered into the Treasury.

RAHWAY RIVER, NEW JERSEY.

(Page 175.)

Work of improvement begun in 1879, and has resulted thus far in increasing the depth of water for 5 miles (from the mouth of the river to near the head of navigation) from $4\frac{1}{2}$ feet at mean high water, to 7 feet in a channel from 40 to 70 feet wide.

Commerce has been benefited by increased advantages for the shipment of coal, lumber, and miscellaneous merchandise. The work being incomplete, the full advantage has not yet been shown.

July 1, 1882, amount available	\$4,556 18
Amount appropriated by act passed August 2, 1882.....	7,000 00
	<hr/>
	11,556 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$4,766 86
July 1, 1883, outstanding liabilities.....	3,254 30
	<hr/>
	8,021 16
July 1, 1883, amount available	3,535 02

ELIZABETH RIVER, NEW JERSEY.

(Page 173.)

Begun in 1879. The advantage to commerce has resulted from an increase of depth from $4\frac{1}{2}$ to 7 feet, affording greater facilities for transportation. The work is still unfinished, but its advantages will be increased as it is carried further up-stream.

Tonnage on the river, for year ending June 30, 1882, 20,937 tons.

Amount appropriated by act passed August 2, 1882	\$8,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$204 54
July 1, 1883, outstanding liabilities.....	2,348 51
	<hr/>
	2,553 05
July 1, 1883, amount available	5,446 95

WOODBIDGE CREEK, NEW JERSEY.

(Page 176.)

Improvement begun in 1879. Benefit to commerce has resulted from increased depth of about 3 feet. The improvement is not yet completed.

The tonnage for the year 1882 was 116,150 tons. Large quantities of clay, fire-brick, drain-pipes, &c., are shipped, and the facilities for transportation are much increased.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	5,000 00

MANASQUAN RIVER, NEW JERSEY.

(Page 174.)

Improvement begun in 1881. The depth on the bar was originally from 1 foot to 18 inches; in the inner basin the least depth was about 4 feet. The improvement is incomplete, and while the general effect of the work so far executed has been to maintain the outlet in a more nearly

stationary condition, and to increase the depth on the bar, so that it now varies from 18 inches to 4 feet, but little benefit has yet resulted to commerce.

July 1, 1882, amount available	\$1,518 92
Amount appropriated by act passed August 2, 1882.....	7,000 00
	<hr/>
	8,518 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$2,393 38
July 1, 1883, outstanding liabilities	6,124 01
	<hr/>
	8,517 39
July 1, 1883, amount available	1 53

RARITAN BAY, NEW JERSEY.

(Page 175.)

Work of improvement begun in 1881. The least depth across the shoal separating the deep water of main ship-channel of New York Harbor, from the deep water leading to Perth Amboy and South Amboy, was 14½ feet at mean low water. This has been increased to 21 feet for a width of 105 feet. The work is still incomplete, a width of 300 feet for the channel being contemplated.

The benefit resulting to commerce is not only to that of the above towns, but to a large extent of country having railroad terminal facilities at these points.

Tonnage cleared and entered at Perth Amboy in 1882, 64,550 tons.

July 1, 1882, amount available	\$207 53
Amount appropriated by act passed August 2, 1882	50,000 00
	<hr/>
	50,207 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$828 34
July 1, 1883, outstanding liabilities	12,364 00
	<hr/>
	13,192 34
July 1, 1883, amount available.....	37,015 19

MATTAWAN CREEK, NEW JERSEY.

(Page 174.)

Improvement begun in 1881. Commerce has been benefited by an increase of the depth from about 2½ to 4 feet at mean low water, from the mouth of the creek to head of navigation, for a width of 100 feet at the bar, and from 25 to 50 feet higher up, the full width intended being not yet attained.

In 1881 the shipments were valued at \$800,000.

July 1, 1882, amount available.....	\$155 09
Amount appropriated by act passed August 2, 1882.....	6,000 00
	<hr/>
	6,155 09
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	6,155 09

CHEESEQUAKES CREEK, NEW JERSEY.

(Page 173.)

The work of improving the navigation of this stream having only been begun in 1882, there are as yet no results to show the advantage to commerce. At present there is only 1 foot depth at low water on the bar at the mouth of the creek.

For the year ending June 30, 1881, the number of vessels passing in and out of the creek was stated to be 560.

July 1, 1882, amount available	\$24,292 11
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	39,292 11
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$21,248 24
July 1, 1883, outstanding liabilities	6,578 46
	<hr/>
	27,826 70
July 1, 1883, amount available.....	11,465 41

KEYPORT HARBOR, NEW JERSEY.

(Page —.)

A harbor in Raritan Bay accessible to steamboats drawing 6 feet, and to small schooners.

First appropriation, August 2, 1882. The least depth at present is about 5 feet at mean low water, which it is proposed to increase to 8 feet. No work has been done.

For the year ending June 30, 1882, the total value of exports was estimated at \$4,070,000, and of imports, \$1,851,250. It is the outlet of many of the products of six townships of New Jersey.

Amount appropriated by act passed August 2, 1882	\$30,475 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$356 65
July 1, 1883, outstanding liabilities	447 12
	<hr/>
	803 77
July 1, 1883, amount available	29,671 23

SHEEPSHEAD BAY, NEW YORK.

(Page 188.)

The depth at the present inlet is about 2 feet at mean low water, with about 4 feet in the interior basin. The plan of improvement provides for a depth of 6 feet.

The work to be executed under the appropriations of 1880, 1881, and 1882 has been contracted for, but not yet begun, and consequently there is as yet no benefit to commerce.

July 1, 1882, amount available.....	\$7,356 18
Amount appropriated by act passed August 2, 1882	3,000 00
	<hr/>
	10,356 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	72 08
	<hr/>
July 1, 1883, amount available.....	10,284 10

CANARSIE BAY, NEW YORK.

(Page 178.)

This improvement is intended to connect Canarsie Landing with the deep water of Jamaica Bay by channel of 6 feet at low water, the original depth being $4\frac{1}{2}$ feet. Nothing having been done beyond the construction of a dike, in 1881, there is as yet but little benefit to commerce, although the dike has had the designed effect of deepening the outlet of Canarsie Channel. The amount of commerce to be benefited has not been reported.

July 1, 1882, amount available	\$5,220 71
Amount appropriated by act passed August 2, 1882	3,000 00
	<hr/>
	8,220 71
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	8,220 71

SUMPAWAMS INLET, NEW YORK.

(Page 188.)

Extends from Great South Bay to the village of Babylon.

The depth in the channel is from 1 to 5 feet at mean low water. The project of improvement provides for a channel having a uniform depth of 5 feet at mean low water.

The work to be executed under the appropriations of 1881 and 1882 has been contracted for, but not yet begun, so that there is as yet no advantage to commerce. The amount of trade has been estimated at \$500,000.

July 1, 1882, amount available.....	\$4,968 00
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	6,968 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	6,861 07
	<hr/>
July 1, 1883, amount available.....	106 93

EAST CHESTER CREEK, NEW YORK.

(Page 179.)

First appropriation 1873. Work begun 1877.

Before improvement the least depth at mean high water was less than 7 feet, with a narrow and crooked channel. This has been increased to 9 feet, and the channel straightened for a distance of about 5,500 feet, with a reduction of nearly half the length of channel.

The advantages of this improvement have been mainly to the towns of East Chester and Mount Vernon in affording increased facilities for transportation of coal, lumber, and general merchandise. The work is incomplete.

Value of commerce to be benefited is estimated at \$2,200,000.

July 1, 1882, amount available.....	\$7,101 80
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	20 00
	<hr/>
July 1, 1883, amount available	7,081 80

NEWTOWN CREEK, NEW YORK.

(Page 183.)

First appropriation 1880. Work begun 1881.

Before the beginning of work the least depth at mean low water in the section of the stream under improvement was $12\frac{1}{2}$ feet. A channel from 15 to 17 feet deep and about 60 feet wide has been excavated.

The improvement being incomplete, the advantage to commerce is not yet fully developed.

In 1880 the amount of commerce to be benefited was estimated at more than \$10,000,000.

This is believed to have largely increased. The principal refineries of petroleum are located on this stream.

July 1, 1882, amount available	\$1,147 11
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	16,147 11
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	15,200 24
	<hr/>
July 1, 1883, amount available	946 87

DELAWARE RIVER, BETWEEN TRENTON AND BRIDESBURG.

(Page 228.)

Improvement begun with the appropriation of 1873, and prosecuted mainly in the vicinity of Bordentown, N. J.

The navigable capacity of this portion of the river before improvement was 3 feet at low water. The least depth is now 6 feet at low water and only on the bar $3\frac{1}{2}$ miles below Bordentown.

The resulting benefit to commerce is facilitating the access to the Delaware and Raritan Canal for the numerous vessels engaged in the canal and river trade.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$6,724 28
July 1, 1883, outstanding liabilities	450 16
	<hr/>
	7,174 44
July 1, 1883, amount available	2,825 56

DELAWARE RIVER, BELOW BRIDESBURG, PENNSYLVANIA.

(Page 228.)

Improvement begun with the appropriation of 1873.

1. *At Five-Mile Point.*—The navigable capacity of the river at this point was from 6 to 7 feet before improvement. It is now 9 feet at mean low water by a straight and narrow channel past this point.

The project contemplates widening the channel.

The improvement has benefited the up-river trade to Trenton and intermediate points.

2. *Petty's Island Bar.*—The navigable capacity here before improvement was 14 feet at low water. The present navigable capacity is 24 feet, in a low-water channel 225 feet wide.

3. *Smith's Island Bar.*—The navigable capacity before improvement was 6 feet at low water. There is now a low-water channel 200 feet wide and 10 feet deep at low water.

4. *Mifflin Bar* (page 229).—First appropriation 1836. The present improvement dates from the appropriation of 1873.

The navigable capacity across this bar when this improvement was begun was about 18 feet at low water; during the last three years it has varied from 22 to 26 feet at low water.

5. *Bulkhead Shoals* (page 229).—The navigable capacity before the improvement was begun was about 21 feet at low water. About one-fourth of a low-water channel of 24 feet depth has been dredged across these shoals to the depth of 22 feet. This channel is designed to be 900 feet wide when finished.

The rapidly-increasing commerce of the city of Philadelphia calling constantly for larger vessels of deeper draught and greater capacity, has been benefited to a marked degree by the increase of a navigable capacity of the Delaware below Bridesburg.

July 1, 1882, amount available	\$74,821 91
Amount appropriated by act passed August 2, 1882	136,000 00
	<hr/>
	210,821 91
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$8,464 97
July 1, 1883, outstanding liabilities	1,117 02
	<hr/>
	89,581 99
July 1, 1883, amount available	121,239 92

6. *Schooner Ledge* (page 229).—First appropriation 1879. The navigable capacity across this ledge before improvement was from 18 to 19 feet at low water. There is now a channel 220 feet wide with 24 feet depth at low water across this, the most dangerous and serious obstruction to the passage of the larger class of vessels.

July 1, 1882, amount available	\$16,377 54
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
	56,377 54
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$44,344 75
July 1, 1883, outstanding liabilities	4,464 60
	<hr/>
	48,809 35
July 1, 1883, amount available	7,568 19

24 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

7. *Cherry Island Flats* (page 229).—Work begun with the appropriation of 1879, at which time there was about 18 to 19 feet at low water in the two channels across these flats. There is now a depth of 24 feet at low water. The new channel is now 390 feet wide. The project contemplates a width of 900 feet.

July 1, 1882, amount available.....	\$26,216 00
Amount appropriated by act passed August 2, 1882.....	100,000 00
	<hr/> 126,216 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$62,699 19
July 1, 1883, outstanding liabilities	19,833 08
	<hr/> 82,532 27
July 1, 1883, amount available	43,683 73

ICE HARBOR AT THE HEAD OF DELAWARE BAY.

(Page —).

The appropriation of August 2, 1882, for this work remains unexpended.

Amount appropriated by act passed August 2, 1882.....	\$25,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	74 78
July 1, 1883, amount available	<hr/> 24,925 22

ICE HARBOR AT REEDY ISLAND, DELAWARE RIVER.

(Page 128.)

At intervals between the years 1828 and 1852, appropriations were made for the construction and repair of piers at this and other points on the Delaware.

The piers here have gone to decay for want of appropriations for repairs, and are now unserviceable.

ICE HARBOR AT MARCUS HOOK, PENNSYLVANIA.

(Page 202.)

The benefit to commerce from this improvement has been to furnish a sheltered area of about eight acres to vessels in winter from running ice. Its capacity might be advantageously increased.

July 1, 1882, amount available	\$38,796 12
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/> 53,796 12
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$8,499 96
July 1, 1883, outstanding liabilities	15,345 00
	<hr/> 23,844 96
July 1, 1883, amount available	29,951 16

ICE HARBOR AT CHESTER, PENNSYLVANIA.

(Page 201.)

The usefulness of this harbor as a shelter to vessels in winter has been so diminished by the extension of private wharves and the gradual advance of the low-water mark, that it is at present of very little value.

RANCOCAS RIVER, NEW JERSEY.

(Page 175.)

First appropriation, 1881. The improvement, so far as made, has been the dredging of a continuous channel, 85 feet wide, through a bar in the stream, to a depth of 6½ at mean low water, where there was before but 4 feet.

The amount of commerce benefited is unknown.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	9,148 10
July 1, 1883, amount available	<hr/> 851 90

FRANKFORD CREEK, PENNSYLVANIA.

(Page —.)

First appropriation, 1882. A 7-foot low-water channel, as wide as the safety of the banks would warrant, has been made from the mouth to the bend above the bridge.

The benefit to be derived from this is to enable vessels of greater draught to ascend to that point.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$509 30
July 1, 1883, outstanding liabilities	8,090 94
	<hr/> 8,600 24
July 1, 1883, amount available	1,399 76

SCHUYLKILL RIVER, PENNSYLVANIA.

(Page 203.)

First appropriation, 1870. When this work was begun the channel of entrance from the Delaware had a mean low-water depth of 15 feet. A low-water channel, from the Delaware to 1,500 feet above Girard's Point, 24 feet deep and 250 feet wide, is now nearly completed; and thence to Point Breeze, one of 20 feet deep, and about 175 feet wide, is also nearly completed.

The lower part of this river, on which the improvements are now in progress, is one of the most important parts of the port of Philadelphia, and the point of departure for the heaviest cargoes.

July 1, 1882, amount available	\$54,093 94
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	79,093 94
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$39,389 15
July 1, 1883, outstanding liabilities	10,484 97
	<hr/>
	49,874 12
July 1, 1883, amount available	29,219 82

WOODBURY CREEK, NEW JERSEY.

(Page —.)

First appropriation, 1882. Nothing was expended on this work up to June 30, 1883, except for a survey.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	450 31
	<hr/>
July 1, 1883, amount available	4,549 69

MANTUA CREEK, NEW JERSEY.

(Page —.)

First appropriation, 1882. No money has yet been expended on this work.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount available	3,000 00

RACoon RIVER, NEW JERSEY.

(Page —.)

First appropriation, 1882. Nothing was expended on this work up to June 30, 1883, except for surveys.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	757 23
	<hr/>
July 1, 1883, amount available	2,242 77

CHESTER CREEK, PENNSYLVANIA.

(Page 201.)

First appropriation 1881. Work is in progress for making a channel $7\frac{1}{2}$ feet deep at low water, and from 40 to 50 feet wide, from a bridge in Chester, the head of navigation, to deep water in Delaware River. Before this work began, the depth of water was $4\frac{1}{2}$ feet.

The creek passes through the heart of the town of which it is the drainage sewer, and is used by small craft and canal boats. Benefit to commerce, local.

July 1, 1882, amount available	\$2,927 08
Amount appropriated by act passed August 2, 1882	3,000 00
	<hr/>
	5,927 08
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	5,927 08

WILMINGTON HARBOR, DELAWARE.

(Page 129.)

First appropriation, 1836. The present improvement of the entrance to and channel of Christina River which constituted the harbor of Wilmington, was begun in 1871, at which time the navigable capacity into Wilmington Harbor was a narrow, 12-foot channel at low water, to near the Third Street bridge in Wilmington, with the exception of a shoal area of considerable extent near the entrance. The project contemplated the creation of a 15-foot low-water channel. The

work is in progress and has been, as far as accomplished, of benefit to the growing commerce of the place.

July 1, 1882, amount available	\$32,443 58
Amount appropriated by act passed August 2, 1882.....	50,000 00
	<hr/>
	82,443 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$68,226 23
July 1, 1883, outstanding liabilities	10,412 93
	<hr/>
	78,639 16
July 1, 1883, amount available	3,804 42

NEW CASTLE HARBOR, DELAWARE.

(Page 128.)

The origin of this artificial harbor dates back to colonial times, and was suggested by the necessity of providing a place of refuge for vessels during the prevalence of ice. The expenditures by the General Government since 1826 have been for the preservation and extension of the inclosed area. This harbor, since that at Reedy Island, 10 miles below, has become useless, is the first reached by vessels coming from sea. During the existence of heavy ice in the Delaware it is usually crowded with vessels, large steamers frequently availing themselves of its shelter.

SALEM RIVER, NEW JERSEY.

(Page 175.)

First appropriation, 1871. The benefit to commerce from this improvement has resulted from an increase of the navigable capacity of the stream by about 3 feet.

There are fifty vessels of all classes with a tonnage of about 4,000 belonging to Salem; but the greater part of its trade, which is considerable, is in vessels belonging to other ports.

July 1, 1882, amount available.....	\$137 93
Amount appropriated by act passed August 2, 1882.....	1,500 00
	<hr/>
	1,637 93
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	147 27
	<hr/>
July 1, 1883, amount available	1,490 66

COHANSEY CREEK, NEW JERSEY.

(Page 173.)

First appropriation, 1873. Before improvement the bed of the stream in front of Bridgeton was almost bare at low water. The stream has now a navigable capacity of 7 feet at low water from Bridgeton to the Delaware River, which has greatly benefited the commerce of the place.

July 1, 1882, amount available.....	\$6,498 41
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	11,498 41
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	10,800 65
	<hr/>
July 1, 1883, amount available.....	697 76

MISPILLION CREEK, DELAWARE.

(Page 128.)

This improvement, begun in 1879, has consisted in removing the shoals in the creek to a depth of 6 feet at low water, beginning at Milford, the head of navigation, and proceeding down-stream. As thus far carried out it has been of much benefit to ship-builders, and to navigation generally, lessening the expense of delays in passing up and down the creek.

The most important business interests are ship-building and the lumber trade. Milford is also the center of a large wheat and fruit growing district.

July 1, 1882, amount available	\$54 32
Amount appropriated by act passed August 2, 1882.....	3,000 00
	<hr/>
	3,054 32
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	3,054 32

MOUTH OF DUCK CREEK, DELAWARE.

(Page 127.)

First appropriation 1880. The benefit to commerce from this improvement has been the dredging of an 8-foot channel at low water, 75 feet wide, and about 600 yards long, where there was originally a least depth of only 3 feet. This, besides adding to the facilities of trade, has



APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 27

made an easier entrance for the numerous small vessels that could only use it as a harbor of refuge whenever the tide admitted their passing into the creek.

Amount appropriated by act passed August 2, 1882.....	\$2,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	2,000 00

SAINT JONES RIVER, DELAWARE.

(Page 129.)

First appropriation 1881. The project provides for a 3-foot low-water channel through the bar at the mouth of the river at a cost of \$35,050. It having been decided to defer the expenditure of this appropriation until further action of Congress, no action has been taken towards the expenditure of the amount available.

July 1, 1882, amount available	\$4,882 10
July 1, 1883, amount available	4,882 10

MAURICE RIVER, NEW JERSEY.

(Page —.)

First appropriation 1882. The original project consisted in improving the navigation in shoal places so as to give a 6-foot channel to Millville, 24 miles from the mouth.

The amount appropriated being too small to be profitably expended, nothing has been done upon the improvement.

The benefit to commerce would be local.

Amount appropriated by act passed August 2, 1882.....	\$3,000 00
July 1, 1883, amount available.....	3,000 00

INDIAN RIVER, DELAWARE.

(Page —.)

First appropriation 1882.

The improvement required is to create a 4-foot channel over the bar and in a shoal in the river, where there is now but 2 feet.

Up to June 30, 1883, a small amount had been expended in dredging upon the shoal in the river.

The benefit to commerce is local.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$537 94
July 1, 1883, outstanding liabilities	854 22
	<hr/>
	1,392 16
July 1, 1883, amount available	8,607 84

BROADKILN RIVER, DELAWARE.

(Page 126.)

First appropriation 1873. Numerous shoals have been dredged between the mouth of the river and the town of Melton to a depth of 5 feet at low water.

The balance of funds now remaining on hand being too small to effect any useful improvement at the entrance, which is obstructed by a broad expanse of shoal, work has been deferred to await future action of Congress.

No benefit to commerce has resulted, owing to the unfinished condition of the improvement.

July 1, 1882, amount available	\$8,977 58
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	13,977 58
July 1, 1883, amount available	13,977 58

IRON PIER IN DELAWARE BAY NEAR LEWES, DELAWARE.

(Page 127.)

The benefit to commerce from this improvement has been very great in furnishing a permanent landing place for the harbor of Delaware Breakwater to vessels seeking the protection or use of that harbor of refuge.

This pier was begun with the appropriation of 1870, and is now about being completed.

July 1, 1882, amount available.....	\$1,274 05
Amount appropriated by an act passed August 2, 1882.....	13,000 00
	<hr/>
	14,274 05
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	8,506 86
	<hr/>
July 1, 1883, amount available.....	5,767 19

HARBOR AT DELAWARE BREAKWATER.

(Page 126.)

This great artificial harbor of refuge was begun with an appropriation made in 1822. It has for many years fulfilled, so far as its capacity has enabled it to do so, the design of its projectors; but the growth of commerce, particularly during the last thirty years, has so far exceeded possible anticipation as to practically exclude more than a fractional part from the intended shelter. Work is now in progress under recent appropriations for closing the gap between the breakwater proper and the ice breaker in order to furnish the larger sheltered area required and to prevent shoaling in the harbor.

Between the dates of February 1, 1862, and July 3, 1879, 218,607 vessels anchored in the harbor. In 1880 the number was 14,000.

Amount appropriated by act passed August 2, 1882.....	\$125,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$17,379 35
July 1, 1883, outstanding liabilities.....	59,322 40
	<hr/>
	76,701 75
July 1, 1883, amount available	48,298 25

REMOVAL OF WRECKS FROM DELAWARE BREAKWATER HARBOR.

(Page 127.)

This has benefited commerce by adding security to vessels using the harbor.

July 1, 1882, amount available	\$5,289 47
July 1, 1883, amount available	5,289 47

IMPROVEMENT OF NORTH BRANCH OF SUSQUEHANNA RIVER, PENNSYLVANIA.

(Page 203.)

First appropriation 1880. The navigable capacity of that part of the river where the projected improvement is now completed was originally $1\frac{1}{2}$ feet. It has now 3 feet at low water to Wilkes Barre.

No statistics of the amount of commerce benefited.

July 1, 1882, amount available	\$5,255 38
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	20,255 38
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$11,772 80
July 1, 1883, outstanding liabilities.....	1,414 20
	<hr/>
	13,187 00
July 1, 1883, amount available	7,068 38

SUSQUEHANNA RIVER NEAR HAVRE DE GRACE, MARYLAND.

(Page 150.)

In 1852, before improvement, the least depth at low water was 6 feet. The channel has been dredged several times since that date to 10 or 12 feet at low water, for temporary relief, with the small appropriations occasionally made at the urgent request of the community interested in the navigation. There has never been an appropriation large enough to justify even beginning a proper improvement. The last one, of 1882, comes nearer to a sufficient sum.

The unsatisfactory results of former attempts at improvement have checked the development of trade between this locality and others, especially Baltimore, which might be reasonably expected.

July 1, 1882, amount available	\$167 54
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	25,167 54
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$6,431 29
July 1, 1883, outstanding liabilities.....	23 01
	<hr/>
	6,454 30
July 1, 1883, amount available	18,713 24

NORTHEAST RIVER, MARYLAND.

(Page 149.)

In 1872, before improvement, the least depth at low water was 2 feet. It is now 6 feet. The improvement has proved of great advantage to shipping interests affected by it.

ELK RIVER, MARYLAND.

(Page 149.)

In 1872, before improvement, the least depth of water at the shallowest place was 1½ feet at mean low water.

There is now a mean low-water depth of 7 feet in the channel.

This improvement has facilitated trade between Baltimore and Elkton, and has lessened costs of freight on coal and other commodities used in the community.

Amount appropriated by act passed August 2, 1882	\$6,500 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	944 42
July 1, 1883, amount available	5,555 58

CHESTER RIVER, FROM SPRY'S LANDING TO CRUMPTON, MARYLAND.

(Page 149.)

In 1881, before improvement, the least depth at mean low water was 4½ feet. It is now 8. The work is in an incomplete state. There is a trade of some importance on the river in steam-boats and sailing vessels, which is expected to increase when the improvement is completed.

July 1, 1882, amount available	\$166 84
Amount appropriated by act passed August 2, 1882.....	6,500 00
	6,666 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$3,231 32
July 1, 1883, outstanding liabilities.....	322 21
	3,553 53
July 1, 1883, amount available	3,113 31

CORSICA CREEK, MARYLAND.

(Page —.)

The first appropriation made is that of August 2, 1882. As but little benefit could be derived from this unless added to by another, its application has been deferred to await future action of Congress.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	4 30
July 1, 1883, amount available	4,995 70

CHESTER RIVER AT KENT ISLAND NARROWS, MARYLAND.

(Page 149.)

First appropriation, 1873. Impassable before improvement, on account of a causeway constructed fifty years since.

A navigation of 7 to 8 feet existing before the causeway was built has been restored by its removal. The work has not been of much benefit to commerce.

July 1, 1882, amount available	\$2,500 00
July 1, 1883, amount available.....	2,500 00

HARBOR AT QUEENSTOWN, MARYLAND.

(Page 150.)

First appropriation in 1871. None since 1879.

The improvement has deepened the channel of approach to the harbor 2 feet.

The benefit to commerce is increased traffic by sailing vessels and steamers, and greater usefulness as a place of refuge in storms.

CHANNEL IN PATAPSCO RIVER AND CHESAPEAKE BAY LEADING TO BALTIMORE, MARYLAND.

(Pages 148, 149.)

Before improvement, but 16 feet at mean low water could be carried to Baltimore. This was increased to 24 feet in 1874, and is now being increased to 27 feet. In addition to the amount appropriated by Congress for this improvement, the city of Baltimore and the State of Maryland, chiefly the former, have contributed \$584,000 to this work.

The improvement has given rise to great development of commerce, especially from its having admitted the use of steamships of the largest size to European and coastwise ports.

July 1, 1882, amount available.....	\$238,361 25
Amount appropriated by act passed August 2, 1882	450,000 00
	688,361 25
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$334,973 23
July 1, 1883, outstanding liabilities	42,505 69
	377,478 92
July 1, 1883, amount available.....	310,882 33

HARBOR OF ANNAPOLIS, MARYLAND.

(Page 148.)

Two appropriations have been made, of \$5,000 each, in 1880 and 1881, but neither has been expended, as no substantial improvement could be expected with the sum appropriated.

July 1, 1882, amount available.....	\$9,205 98
July 1, 1883, amount available.....	9,205 98

CAMBRIDGE HARBOR, MARYLAND.

(Page 148.)

First appropriation, 1871. Before improvement about $4\frac{1}{2}$ feet only could be carried to the wharves of the town.

A channel has been made from deep water to the wharves 100 feet wide and 8 feet deep at low water and the inner harbor enlarged, by which the trade of the town has been much benefited.

July 1, 1882, amount available.....	\$2,687 70
July 1, 1883, amount available.....	2,687 70

SECRETARY CREEK, MARYLAND.

(Page 150.)

In 1877 not more than about $4\frac{1}{2}$ feet could be carried in the creek when funds were raised by private parties and some dredging done. First appropriation by United States, 1880. The channel has been made 100 feet wide, and 7 feet deep at low water, with a turning-basin at the town wharf.

There is a daily line of steamers on this creek running to other points and to Baltimore, and also considerable shipment of grain and fruit in the season.

TREADHAVEN CREEK, MARYLAND.

(Page 150.)

First appropriation, 1880. The improvement here has been the making of a channel 150 feet wide and 8 feet deep at low water for 3 miles up to Easton Point, the landing place of the town of Easton, which has a large trade in grain, fruit, lumber, &c.

CHOPTANK RIVER, BETWEEN DENTON AND GREENSBOROUGH, MARYLAND.

(Page 149.)

First appropriation, 1880. There are numerous and extensive shoals in the river, with from 2 to 4 feet depth at mean low water. The improvement is not completed and is designed for a 6-foot low-water channel. Benefit to commerce is as yet small.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	4,949 67
July 1, 1883, amount available.....	50 33

WATER PASSAGE BETWEEN DEAL'S ISLAND AND LITTLE DEAL'S ISLAND, MARYLAND. LOWER THOROUGHFARE.

(Page 149.)

This, before improvement in 1881, had a depth of $2\frac{1}{2}$ feet at mean low water; it has now 6 feet. The benefit to commerce is that it furnishes a harbor of refuge, needed in that vicinity, for small vessels.

July 1, 1882, amount available.....	\$78 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	76 67
July 1, 1883, amount available.....	2 25

WATER PASSAGE BETWEEN DEAL'S ISLAND AND THE MAINLAND, MARYLAND. UPPER THOROUGHFARE.

(Page —.)

First appropriation, August 2, 1882. Work not yet begun.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	189 74
July 1, 1883, amount available.....	4,810 26

BROAD CREEK, DELAWARE, FROM ITS MOUTH TO LAUREL.

(Page 126.)

First appropriation, 1880. Depth of water at shoalest places, about 1 foot at mean low water, but generally much deeper. The work in progress is to obtain a low-water navigation of 6 feet to Laurel.

The work being incomplete has been as yet of no advantage to commerce.

July 1, 1882, amount available	\$6,170 17
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	11,170 17
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	11,170 17

WICOMICO RIVER, MARYLAND.

(Page 151.)

The first appropriation in 1872, and none since 1879. Before improvement there were but a few inches of water over the shoalest places at mean low water, where there is now a depth of 7 feet. The improvement has given rise to much development of traffic on the river, and of industries in the town of Salisbury.

July 1, 1882, amount available	\$1,508 41
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	123 03
	<hr/>
July 1, 1883, amount available	1,385 38

POCOMOKE RIVER, MARYLAND.

(Page 150.)

Appropriation for this improvement was made in 1878 and 1879, and applied to widening and straightening the channel, and has increased the depth at mean low water 2 feet.

The benefit to commerce is an increase of traffic between this and other localities, especially Baltimore.

WORTON HARBOR, MARYLAND.

(Page 151.)

The only appropriation for this harbor was in 1872; its expenditure has increased the depth of water in the shoalest places from $4\frac{1}{2}$ feet at mean low water to 7 feet, and has given increased facilities to trade between this and other localities, especially Baltimore.

HARBOR OF CRISFIELD, MARYLAND.

(Page 149.)

The only appropriation for this harbor was in 1875, and the improvement was the excavation of a channel 266 feet wide and 12 feet deep at mean low water, when the depth before improvement was but $8\frac{1}{2}$ feet.

Present condition of navigation and commerce not known.

HARBOR OF ONANCOCK, VIRGINIA.

(Page 214.)

First appropriation, 1879. This improvement has resulted in an increase of depth on the bar at the entrance and in the creek from $4\frac{1}{2}$ to 7 feet at mean low water, and has increased the traffic between this locality and others, especially Baltimore.

JAMES RIVER, VIRGINIA.

(Page 213.)

In 1836 there was an appropriation of \$500 for a survey of this river, and in 1852, \$45,000 for the improvement of James and Appomattox rivers. This was chiefly expended in dredging in co-operation with the authorities of Richmond.

The work of improvement since 1870 has resulted in increasing the depths over the shoalest places from $7\frac{1}{2}$ feet at mean low water to $13\frac{1}{2}$ feet. The improvement is still incomplete. Its benefit to commerce is much increased in the number and size of vessels trading to Richmond, and in the quantity and value of their freight.

July 1, 1882, amount available	\$4,361 82
Amount appropriated by act passed August 2, 1882	75,000 00
	<hr/>
	79,361 82
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	7,252 54
	<hr/>
July 1, 1883, amount available	72,109 28

APPOMATTOX RIVER, VIRGINIA.

(Page 211.)

The work of improvement made with appropriations since 1871 has resulted in increasing the depths over the shoalest places from $3\frac{1}{2}$ to $7\frac{1}{4}$ feet at mean low water. The improvement is still incomplete. Its benefit to commerce is much increased in the number and size of vessels trading to Petersburg, and in the value and quantity of their freight.

July 1, 1882, amount available.....	\$852 41
Amount appropriated by act passed August 2, 1882.....	35,000 00
	<hr/>
	35,852 41
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	13,373 00
	<hr/>
July 1, 1883, amount available	22,479 41

SHENANDOAH RIVER, VIRGINIA.

(Page 217.)

First appropriation, 1880. Nothing has been done as yet upon this improvement, some questions of title to sites, &c., being unsettled.

July 1, 1882, amount available.....	\$17,312 20
July 1, 1883, amount available.....	17,312 20

NEW RIVER, FROM THE MOUTH OF WILSON IN GRAYSON COUNTY, VIRGINIA,
TO MOUTH OF GREENBRIER IN WEST VIRGINIA.

(Page 254.)

First appropriation, 1876. The appropriations have been small. They have been expended in the improvement of the low-water navigation, chiefly in straightening, widening, and deepening the natural chutes.

The benefit to commerce is a notable increase of shipments on the river of agricultural and mineral products. The navigation, hitherto intermittent and dependent on rises, is now much more regular and economical.

July 1, 1882, amount available.....	\$3,506 10
Amount appropriated by act passed August 2, 1882.....	12,000 00
	<hr/>
	15,506 10
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	12,419 44
	<hr/>
July 1, 1883, amount available.....	3,086 66

GREAT KANAWHA RIVER, WEST VIRGINIA.

(Page 216.)

The appropriations of 1873 and 1874 were for temporary improvements. Since 1875 work has been in progress for an improvement by locks and dams, to give a navigation of 6 feet water at all times. The work is well advanced, and has given great impetus to shipments, especially of coal. Full advantage cannot be realized until the improvement is complete.

July 1, 1882, amount available.....	\$135,209 96
Amount appropriated by act passed August 2, 1882.....	200,000 00
	<hr/>
	335,209 96
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$107,479 91
July 1, 1883, outstanding liabilities	17,203 55
	<hr/>
	124,683 46
July 1, 1883, amount available.....	210,526 50

ELK RIVER, WEST VIRGINIA.

(Page 216.)

First appropriation, 1878. The small appropriations for this river have been applied to the removal of such obstructions as rocks, snags, overhanging trees, and gravel shoals, by which there has been a gain of about 1 foot of depth.

The country through which this stream flows is rich in minerals and well fitted for agriculture and grazing. The river is the route for its trade.

What little improvement has been made has been of great benefit to that as yet undeveloped section.

July 1, 1882, amount available.....	\$973 90
Amount appropriated by act passed August 2, 1882.....	2,000 00
	<hr/>
	2,973 90
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	10 00
	<hr/>
July 1, 1883, amount available.....	2,963 00

CAPE FEAR RIVER FROM THE OCEAN TO WILMINGTON, NORTH CAROLINA.

(Page 189.)

Appropriations were made at intervals between the years 1820 and 1854.

The present improvement dates from 1871, and has increased the depth of water from the ocean to Wilmington from 7½ feet at mean low water at the shoalest places to 11 feet. The rise of tide being about 4½ feet, 14½ feet can, at ordinary spring tides, be carried at high water from Wilmington to Smithville, and 18 feet from thence to the sea.

The improvement is as yet incomplete, and has in view a depth of not less than 16 feet at low water to Wilmington.

It has benefited commerce by much increase, observable in the number and size of vessels, coastwise and foreign, trading to Wilmington, and in the quantity and value of their cargoes.

July 1, 1882, amount available	\$63,030 74
Amount appropriated by act passed August 2, 1882	225,000 00
	<hr/>
	288,030 74
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$108,746 92
July 1, 1883, outstanding liabilities	10,891 30
	<hr/>
	119,638 22
July 1, 1883, amount available	168,392 52

HARBORS OF WASHINGTON AND GEORGETOWN, DISTRICT OF COLUMBIA.

(Page 224.)

An appropriation of \$150,000 was made in 1833 to aid the citizens of Georgetown in removing obstructions to navigation by enlarging and deepening the channel through the bar below the town, and for the purchase and making free the bridge at Little Falls, and for other purposes. This appropriation was expended by the corporation of Georgetown.

With the appropriation of 1870, and of subsequent dates, the harbors of Washington and Georgetown have had the depth of water increased from 7½ feet before 1870 to a depth of from 14 to 16 feet, which depth has been maintained, and their commercial facilities proportionally increased.

The value of the trade of Washington and Georgetown during the year 1882 was reported to be \$7,373,070.

July 1, 1882, amount available	\$57,621 59
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$11,154 53
July 1, 1883, outstanding liabilities	773 27
	<hr/>
	11,927 80
July 1, 1883, amount available	45,693 79

IMPROVEMENT OF THE POTOMAC RIVER IN THE VICINITY OF WASHINGTON, DISTRICT OF COLUMBIA.

(Page --.)

Work under the appropriation of 1882, for the reclamation of the Flats, is in progress. The appropriation also provides for the improvement of navigation, and the plan adopted contemplates deepening the channels of approach to the wharves of Washington and Georgetown to 20 feet at low water.

Amount appropriated by act passed August 2, 1882	\$400,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$49,186 86
July 1, 1883, outstanding liabilities	4,222 97
	<hr/>
	53,409 83
July 1, 1883, amount available	346,590 17

CHANNEL AT MOUNT VERNON, VIRGINIA.

(Page 215.)

In 1879, before improvement, there was a depth of but 4 feet at low water over the wide flat between the wharf at Mount Vernon and the channel of Potomac River.

There is now a channel 145 feet wide, from 7 to 9 feet deep at low water, with a turning-basin of 150 feet radius at the wharf, permitting the passage of steamers at all tides and adding largely to business. The number of visitors to Mount Vernon during the year 1882, 18,000.

July 1, 1882, amount available	\$57 14
July 1, 1883, amount available	57 14

NEABSCO CREEK, VIRGINIA.

(Page 213.)

First appropriation, 1881. The improvement as far as made has resulted in securing a channel 50 feet wide and from 4 to 5 feet deep at low water over a wide flat 1½ miles in length having a least depth of 2½ feet, admitting the entrance to the creek of a larger class of vessels. An area of about 50 square miles of country is benefited by the improvement.

July 1, 1882, amount available	\$286 67
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	229 40
	<hr/>
July 1, 1883, amount available	57 27

BRETON BAY (LEONARDTOWN), MARYLAND.

(Page 149.)

In 1878, before the commencement of work here, there was but 5 feet depth in the channel to Leonardtown. There is now a channel to the wharves 115 feet wide and 9 and 10 feet deep, with a turning basin at the end, which has opened the trade of the vicinity to steamers and to a larger class of sailing vessels.

This is now one of the regular landing places of the Potomac River and Chesapeake Bay steamboats. Annual shipments, \$176,000.

July 1, 1882, amount available	\$3 95
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/> 5,003 95
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	4,987 99
	<hr/> 15 96
July 1, 1883, amount available	

NOMINI CREEK, VIRGINIA.

(Page 214.)

First appropriation, 1873. Before improvement navigation was obstructed at the mouth of the creek by a bar with a ruling depth of 3 feet at low water. There is now a depth of from 9 to 10 feet carried through this bar for a distance of about 4,400 feet, by which $8\frac{1}{2}$ feet can be carried for 3 miles up the stream and $5\frac{1}{2}$ feet for $2\frac{1}{2}$ miles further.

Before improvement there were no shipments from the creek. Five steamers now make landings, beside the larger class of sailing vessels. Annual value of receipts and shipments, \$167,000.

Amount appropriated by act passed August 2, 1882	\$2,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	121 46
	<hr/> 1,878 54
July 1, 1883, amount available	

OCCOQUAN RIVER, VIRGINIA.

(Page 214.)

First appropriation, 1873. This improvement has deepened to 5 feet the channel to Occoquan, where the depth of water was originally from $1\frac{1}{4}$ to $2\frac{3}{4}$ feet, by which the expense of lighterage is saved and larger vessels can pass. The amount of the trade of the place is from \$150,000 to \$200,000 annually. Small steamers make two trips weekly from Washington.

ACCOTINK RIVER, VIRGINIA.

(Page 211.)

In 1873 a channel was made from $2\frac{1}{2}$ to 4 feet deep, the appropriation being insufficient to do more. It has since partially filled, so that steamboats are now unable to navigate the creek. In its present condition the improvement is of no benefit to commerce.

AQUIA CREEK, VIRGINIA.

(Page 212.)

First appropriation, 1872. Before improvement there was a depth of 2 feet, and since a depth of 5 feet at low water from Wharton's Landing to the Narrows, a distance of $2\frac{1}{2}$ miles, which has increased the facilities of commerce.

This is one of the regular landings of the Potomac River steamboats.

SAINT JEROME'S CREEK, MARYLAND.

(Page 150.)

First appropriation, 1881. The object of this improvement is the establishment of ponds for the hatching of oysters by the United States Fish Commission. As far as the work has progressed the entrance to the creek and the inner channel have been deepened to 4 feet.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	4,872 26
	<hr/> 127 74
July 1, 1883, amount available	

RAPPAHANNOCK RIVER, VIRGINIA.

(Page 215.)

There was a small appropriation for this river in 1852.

In 1871, before the present improvement was begun, there was a depth of 4 to 8 feet over nine bars below Fredericksburg, with wrecks and snags obstructing navigation. There is now a clear channel of from 8 to 10 feet at low water.

The benefit to commerce is the preservation and improvement of the navigation of the Rappahannock.

Value of commerce and manufactures of Fredericksburg in 1880, \$4,524,925.

July 1, 1882, amount available	\$5,425 74
Amount appropriated by act passed August 2, 1882	17 000 00
	<hr/>
	22,425 74
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$19,044 76
July 1, 1883, outstanding liabilities	876 31
	<hr/>
	19,921 07
July 1, 1883, amount available	2,504 67

URBANA CREEK, VIRGINIA.

(Page 215.)

In 1879, before improvement, the ruling depth over the bar between the mouth of the creek and the main channel of the Rappahannock was 6½ feet at low water. There is now a channel through this bar 140 feet wide and 10 feet deep. Steamboats and a larger class of sailing vessels can now enter, and an excellent harbor of refuge has been made where much needed.

Value of the annual trade benefited, \$335,000.

July 1, 1882, amount available.....	\$21 27
Amount appropriated by act passed August 2, 1882.....	4,000 00
	<hr/>
	4,021 27
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	411 51
July 1, 1883, amount available	3,609 76

YORK RIVER, VIRGINIA.

(Page 215.)

First appropriation, 1880. Before the commencement of the present improvements navigation of the river was obstructed by a bar at the mouth of Potopotank Creek, having a least depth of 19 feet at low water, and a bar at West Point having a least depth of 14 feet at low water.

The work of improvement is in progress and incomplete.

It is intended to provide a channel by dredging 22 feet deep and 200 feet wide through the bars, and also a basin of the same depth at the wharves at West Point, to meet the demands of the foreign trade of this important shipping port.

The value of shipments in 1882 are reported to have been, cotton, 138,284 bales, \$14,661,240; unclassified shipments, \$13,774,296; total, \$28,435,536.

July 1, 1882, amount available	\$99 59
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	25,099 59
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	20,306 46
July 1, 1883, amount available.....	4,793 13

TOTUSKY RIVER, VIRGINIA.

(Page 215.)

The appropriations of 1880 and 1881 being inadequate for any useful purpose, the work of improvement was deferred to await further appropriations.

The additional appropriation of 1882 will now enable work to be commenced where most needed for the purposes of navigation.

Totusky River is an important tributary of the Rappahannock, with about 100 square miles of country dependent upon its landings.

The value of trade in 1880 is reported as \$170,000, and yearly increasing.

July 1, 1882, amount available.....	\$4,945 81
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	9,945 81
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	8,242 65
July 1, 1883, amount available.....	1,703 16

MATTAPONI RIVER, VIRGINIA.

(Page 213.)

Before the commencement of this improvement in 1880 the river was obstructed by numerous bars, and by snags, wrecks, and overhanging trees. The obstructions have been removed for a distance of about 25 miles, but the navigable capacity of this stream will not be increased until the bars are removed.

36 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The improvement thus far has enabled steam navigation to be extended 5 miles further up than before.

Annual exports are reported to be \$2,058,500; annual imports are reported to be \$826,500.

July 1, 1882, amount available.....	\$769 85
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	769 85

HAMPTON RIVER, VIRGINIA.

(Page 213.)

First appropriation, 1878. Before improvement the least depth upon the bar at the mouth of the river was 4½ feet. The expenditure resulted in securing a channel through this bar 150 feet wide and 9 to 10 feet deep at low water. A jetty may possibly be needed to secure the permanency of the channel. This river is the outlet of three counties. The number of arrivals and departures of steam and sail vessels is given at 1,450 annually.

PAMUNKEY RIVER, VIRGINIA.

(Page 215.)

In 1880, before improvement, the river was obstructed by snags, logs, overhanging trees, and wrecks. These have been removed for a distance of 20 miles, which has benefited the adjoining section of the country, unusually rich in agricultural products.

July 1, 1882, amount available.....	\$166 72
Amount appropriated by act passed August 2, 1882.....	2,500 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	2,666 72
July 1, 1882.....	166 72
	<hr/>
July 1, 1883, amount available.....	2,500 00

CHICKAHOMINY RIVER, VIRGINIA.

(Page 212.)

First appropriation, 1878. Channels have been dredged through bars in the river 150 feet and 100 feet in width, and 8 feet in depth at low water, where there was originally a depth of 4 to 5 feet, which has diminished the expense of lighterage and delays, and has been of much benefit to navigation.

The value of the trade of the river was reported to be in 1881, \$1,350,000.

July 1, 1882, amount available.....	\$1,758 37
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	6,758 37
July 1, 1882.....	6,207 20
	<hr/>
July 1, 1883, amount available.....	551 17

ROANOKE RIVER, VIRGINIA AND NORTH CAROLINA.

(Page 192.)

With the appropriations made from 1871 to 1875, such snags, rafts, and overhanging trees as obstructed navigation were removed between Plymouth and Weldon. These obstructions have again accumulated as far up as the head of heavy-draught steamboat navigation, a distance of 65 miles, and seriously interfered with the trade on the river. The appropriation of August 2, 1882, will be applied in part to the removal of these obstructions.

Value of imports from northern ports landed at Plymouth and other places on the river in 1879, \$1,500,000. Value of products, including lumber of all kinds, cotton and other products, and the fisheries, \$2,500,000, as reported by the collector of Edenton.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	1,274 81
	<hr/>
July 1, 1883, amount available.....	3,725 19

DAN RIVER, VIRGINIA AND NORTH CAROLINA.

(Page 228.)

First appropriation, 1880. Navigation is obstructed by ledges of rock forming rapids, but with navigable depths in the pools between. The work of improvement, as far as it has progressed, has secured, by blasting, a depth of 2 feet at low water and 3 and 4 feet at ordinary stages, for a distance of 4½ miles above Danville, and will, whenever completed, open to navigation a section of country rich in agricultural and mineral resources.

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 37

The value of the trade of Danville in 1881 is reported to have been about \$8,000,000, of which the value of tobacco exported was \$5,634,351.

July 1, 1882, amount available.....	\$786 05
Amount appropriated by act passed August 2, 1882.....	7,500 00
	<hr/>
	8,286 05
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	4,030 28
	<hr/>
July 1, 1883, amount available	4,255 77

STAUNTON RIVER, VIRGINIA, BETWEEN ROANOKE STATION AND BROOKNEAL.

(Page 215.)

First appropriation in 1879. The improvement, as far as it has progressed, extends a distance of about 9½ miles, with a depth of 2 to 3 feet at low water, where before the ruling depth was about 1 foot. The length of river to be improved is about 31 miles. This will benefit trade by enabling produce to reach a market by water which it would not pay to transport in any other way.

July 1, 1882, amount available	\$237 97
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,237 97
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,489 20
	<hr/>
July 1, 1883, amount available	3,748 77

STAUNTON RIVER, VIRGINIA, BETWEEN BROOKNEAL AND PIG RIVER.

(Page —.)

First appropriation, in 1882. The amount expended to June 3, 1883, has been \$508.94 for a survey of the river from the bridge of the Virginia Midland Railroad to Pig River.

Amount appropriated by act passed August 2, 1882.....	\$2,000 00
July 1, 1883, amount expended during fiscal year	508 94
	<hr/>
July 1, 1883, amount available.....	1,491 06

FRENCH BROAD RIVER, NORTH CAROLINA.

(Page 230.)

First appropriation, 1876. A channel has been opened 35 feet wide and 2½ feet deep at low water for a distance of 32 miles from Brevard, where before the ruling depth was about 1 foot, which opens an inexpensive communication through a portion of the country whose forests are in a primeval state, and various kinds of timber of superior quality are abundant.

July 1, 1882, amount available.....	\$9 08
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,009 08
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,364 60
	<hr/>
July 1, 1883, amount available	3,644 48

NORFOLK HARBOR, VIRGINIA.

(Page 214.)

First appropriation, 1876. This improvement is still in progress and incomplete. The work done has been of material benefit to commerce, as deep-draught vessels are now enabled to come up to the harbor and to the navy-yard at all stages of the tide. The depth on the bars in the approach to the harbor has been increased from 17 and 18 feet to 25 feet at low water; in the inner harbor it has been increased from 16 to 22 feet in one portion, and in others to 25 feet at low water, and additional facilities have been afforded for the loading of merchant ships.

The value of shipments from this port has increased from \$7,825,112 in 1876 to \$17,732,038 in 1882.

July 1, 1882, amount available.....	\$49,015 98
Amount appropriated by act passed August 2, 1882	75,000 00
Amount received from Capt. Jas. Mercur for fuel	67 50
	<hr/>
	124,083 48
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$81,902 52
July 1, 1883, outstanding liabilities	8,998 28
	<hr/>
	90,900 80
July 1, 1883, amount available.....	33,182 68

DISMAL SWAMP CANAL, VIRGINIA AND NORTH CAROLINA ("IMPROVING THE NAVIGATION OF THE NATURAL CHANNELS AT THE NORTH AND SOUTH ENTRANCES TO").

(Page 229.)

Appropriations of 1836 and 1838. The shoals in Joyce's Creek, at the southern end of the canal, were dredged, and the navigation of the creek improved by cut-offs. At the northern entrance, an unsuccessful attempt having been made to secure a permanent channel of 10 feet in Deep Creek by dredging, a plan was adopted, with the co-operation of the canal company, to change the outlet of the canal to Elizabeth River by a cut of $2\frac{1}{4}$ miles, and the construction of a new outlet lock. The new cut was opened at the expense of the company, but Congress failed to make appropriation for the lock. At this time the United States held \$150,000 of the stock of the canal company.

The Dismal Swamp Canal is an important link in the inland navigation from Chesapeake Bay to the sounds of North Carolina.

PAGAN CREEK, VIRGINIA.

(Page 214.)

First appropriation, 1880. The depth of water through four bars, between the mouth of the creek and Smithfield has been increased from 6 to 9 feet, and a material increase of commerce has followed the improvement.

July 1, 1882, amount available.....	\$177 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	177 53

NANSEMOND RIVER, VIRGINIA.

(Page 213.)

First appropriation, 1873. Before improvement but 4 feet could be carried over the bar at the mouth of the western branch of the river at low water. There is now about 9 feet at the same stage. Schooners load at Suffolk to $11\frac{1}{4}$ feet, and pass down the river at high tide and out to the ocean.

The improvement has been of very great benefit to the navigation and to the commerce of the adjacent country.

ARCHER'S HOPE RIVER, VIRGINIA.

(Page 212.)

First appropriation, 1881. Improvement not completed. It is proposed to increase the depth of water from 4 feet to 6 feet at low water. No benefit to commerce as yet realized. There is only one small schooner on the river, making weekly trips.

July 1, 1882, amount available.....	\$107 97
Amount appropriated by act passed August 2, 1882.....	5,000 00
	5,107 97
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$4,838 76
July 1, 1883, outstanding liabilities.....	75 00
	4,913 76
July 1, 1883, amount available.....	194 21

ELIZABETH RIVER, VIRGINIA.

(Page 212.)

First appropriation, 1873. The expenditures here have been for the improvement of the southern branch of the river, through which the entire traffic of the Albemarle and Chesapeake Canal passes. The depth of water to the canal locks has been deepened from 5 feet to $7\frac{1}{2}$ feet, and the channel of the river much straightened.

The commerce passing through the canal and river has very nearly doubled since the beginning of the improvement in 1874.

BLACKWATER RIVER, VIRGINIA.

(Page 212.)

First appropriation, 1878. Before improvement the ruling depth was 7 feet, with bends so abrupt as to require warping around them. The river was also obstructed by snags and trees.

The river has been cleared, the bends straightened, and the water deepened to not less than 9 feet.

The commerce of the river has largely increased since the improvement, and is still growing.

July 1, 1882, amount available.....	\$1,490 36
Amount appropriated by act passed August 2, 1882.....	1,500 00
	2,990 36
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	1,385 93
July 1, 1883, amount available.....	1,604 43

NOTTOWAY RIVER, VIRGINIA.

(Page 214.)

First appropriation, 1880. Before improvement sunken logs at the mouth of the river reduced the navigable depth to about 2 feet; 11 feet can now be carried as far up as the Seaboard and Roanoke Railroad bridge. Logs and other obstructions were also removed from the river for 20 miles above this bridge.

The improvement has not led to the development of much trade on the river.

July 1, 1882, amount available	\$579 70
July 1, 1883, amount available	579 70

NORTH LANDING RIVER, VIRGINIA AND NORTH CAROLINA.

(Page 254.)

First appropriation, 1879. The depth of water on this river before improvement was limited in places to 6½ feet, and bad bends existed. The least depth is now 9 feet, and the bends have been made much easier, thus allowing much larger vessels to pass.

The returns of the Albemarle and Chesapeake Canal, through which all vessels navigating this river must pass to reach northern or southern ports, show an increase of 7 per cent. in the number of vessels passing, and that the commerce of the river has been materially increased.

July 1, 1882, amount available	\$1,250 92
Amount appropriated by act passed August 2, 1882.....	8,000 00
July 1, 1883, amount available	9,250 92

CURRITUCK SOUND, COANJOK BAY, AND NORTH RIVER AND BAR, NORTH CAROLINA.

(Page 190.)

First appropriation, 1878. A channel has been dredged through the entire length of Currituck Sound and across Coanjok Bay, and a dike constructed in this bay. The depth of water has been increased from 7 to 9 feet over the greater portion of the dredged channel. Navigation has been improved, and commerce has considerably increased, as is shown by the returns of the Albemarle and Chesapeake Canal, which is the outlet for all vessels passing through Currituck Sound.

July 1, 1882, amount available	\$1,127 41
Amount appropriated by act passed August 2, 1882.....	20,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstand- ing liabilities July 1, 1882.....	21,127 41
July 1, 1883, outstanding liabilities	\$12,686 33
July 1, 1883, outstanding liabilities	1,394 57
July 1, 1883, amount available	14,080 90
July 1, 1883, amount available	7,046 51

EDENTON HARBOR, NORTH CAROLINA.

(Page 190.)

First appropriation, 1878. The depth of water from the town of Edenton to the bay has been increased by dredging from 6½ to 9 feet, with material benefit to navigation. Since this work was done a railroad has been built from Norfolk to this place, and its commerce has greatly increased.

PERQUIMANS RIVER, NORTH CAROLINA.

(Page 192.)

The removal of logs, stumps, &c., which obstructed the navigation of the stream at Hertford, was accomplished with the appropriation of 1876. A channel 200 feet wide and 8½ feet deep was secured, so that steamers now pass without detention.

A large amount of timber is floated down the stream, and the usual yearly exports amount to about 25,000 bushels corn and 1,500 hales of cotton.

MEHERRIN RIVER, NORTH CAROLINA.

(Page —.)

First appropriation, 1882.

No expenditure has been made under this appropriation.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, outstanding liabilities	163 19
July 1, 1883, amount available	4,836 81

SCUPPERNONG RIVER, NORTH CAROLINA.

(Page 192.)

First appropriation, 1878. The depth of water has been increased from 5½ to 8½ feet and the channel much straightened. A regular line of steamers now runs on the river in connection with the railroad at Edenton.

July 1, 1882, amount available	\$10 64
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	10 64

WASHINGTON HARBOR, NORTH CAROLINA.

(Page 192.)

The appropriation of 1852 was applied to the removal of stumps and logs from the channel of the river a little below the town, so as to secure an 8-foot channel.

PAMPLICO AND TAR RIVERS, NORTH CAROLINA.

(Page 191.)

The appropriations of 1836 and 1838 were expended in dredging below the town of Washington on Pamlico River. The present improvement was begun with the appropriation of 1876.

The navigation of the Pamlico has been increased from 7½ feet, at high water, to 8½ feet at low water. On Tar River, boats drawing 3 feet can now reach Greenville at all times, where, before, the navigation was confined to high stages of the river.

An increase of commerce has resulted from the improvement of each of these rivers. The shipment of cotton has increased from 21,000 to 35,000 bales; rice from 4,900 to 8,668 bags, and lumber from 1,281,000 feet to 5,000,000 feet. The imports are said to have increased 33 per cent.

July 1, 1882, amount available.....	\$2,069 28
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/> 12,069 28
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$3,906 75
July 1, 1883, outstanding liabilities.....	26 00
	<hr/> 3,932 75
July 1, 1883, amount available.....	8,136 53

NEW RIVER, NORTH CAROLINA.

(Page 191.)

The appropriations of 1836, 1837, and 1838 were not expended on New River.

The appropriation of 1882, being too small to justify the commencement of work, has not been expended.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount available.....	5,000 00

BEAUFORT HARBOR, NORTH CAROLINA.

(Page 189.)

The appropriations of 1881 and 1882 are being applied in protecting and building out the shore at the entrance to the harbor, with the object of preserving the existing channel and maintaining the depth of water on the bar. The work has so far been successful and the channel has remained in good condition.

The benefit to commerce expected from this improvement is the preservation of the deep-water entrance to Beaufort, both for the purposes of trade and as a harbor of refuge.

July 1, 1882, amount available.....	\$25,897 09
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/> 55,897 09
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$31,313 95
July 1, 1883, outstanding liabilities.....	2,513 75
	<hr/> 33,827 70
July 1, 1883, amount available.....	22,068 39

REMOVING SHOAL IN NEW RIVER, NORTH CAROLINA.—IMPROVEMENT OF THE HARBOR OF BEAUFORT.—OPENING A PASSAGE BETWEEN BEAUFORT AND PAMPLICO SOUND.—IMPROVING NEW RIVER.

(Pages 189-191.)

Appropriations amounting to \$55,000 were made in 1836, 1837 and 1838, under the above heads jointly. They were expended with the view of making Beaufort the outlet of Pamlico Sound to the sea, in the purchase of dredging plant, and in the excavation of a cut of considerable size in Core Sound, as part of the proposed passage from Pamlico Sound. Nothing was expended on New River, as the objects to be attained were not considered of sufficient importance to warrant the cost of improvement.

The work commenced in Core Sound resulted in no benefit to commerce, for want of appropriations for its completion.

LINE OF INLAND NAVIGATION FROM NEW BERNE TO BEAUFORT, NORTH CAROLINA.

(Page —.)

The river and harbor act of August 2, 1882, sets apart \$5,000 from the appropriation for the improvement of Beaufort Harbor, and \$5,000 from the appropriation for the improvement of

Neuse River, to be applied to the improvement of the line of inland navigation from New Berne to Beaufort Harbor.

The appropriation of 1882 not expended, it not being known to which line it was the intention of Congress to apply it.

NEUSE RIVER, NORTH CAROLINA.

(Page 190.)

First appropriation, 1878. Before improvement the river was practically closed to navigation above New Berne, and below that point an obstruction placed in the river during the war had only a narrow passage through it. It is now open for navigation to boats drawing 3 feet, for 160 miles during two-thirds of the year.

During the coming season it will be made navigable at all times to Kingston, 50 miles above New Berne.

Before improvement but one steamer was running on the river. Now eight steamers run regularly. The increase in produce passing is 400 to 500 per cent.

July 1, 1882, amount available.....	\$11,392 56
Amount appropriated by act passed August 2, 1882.....	35,000 00
	<hr/>
	46,392 56
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$22,609 27
July 1, 1883, outstanding liabilities.....	1,001 80
	<hr/>
	23,611 07
July 1, 1883, amount available.....	22,781 49

TRENT RIVER, NORTH CAROLINA.

(Page 192.)

First appropriation, 1879. Before improvement the river was only navigable about half-way to Trenton, and the upper part of the stream entirely closed.

It is now passed over daily by steamers drawing over 3 feet, to Trenton, 43 miles. The lower part of the river can be navigated at all times by vessels drawing 6 or 8 feet.

Three-fourths of the increase of the products carried on the river is due to the improvement, independent of any natural increase of production.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$1,557 38
July 1, 1883, outstanding liabilities.....	40 00
	<hr/>
	1,597 38
July 1, 1883, amount available.....	8,402 62

CONTENTNEA CREEK (MOCCASIN), NORTH CAROLINA.

(Page 190.)

First appropriation, 1881. This stream was not navigable at all except by small flats during freshets. Steamers drawing 3 feet are now passing over it continually for one-half or two-thirds of the year, as far as the clearing of the stream has progressed, about 40 miles from its mouth.

The navigation of this and the Neuse and Trent is mainly carried on by the same boats, which are transferred from one to another as trade requires, with much benefit to commerce.

July 1, 1882, amount available.....	\$306 01
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	10,306 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$8,421 64
July 1, 1883, outstanding liabilities.....	1,014 25
	<hr/>
	9,435 89
July 1, 1883, amount available.....	870 12

YADKIN RIVER, NORTH CAROLINA.

(Page 192.)

First appropriation, 1879. Work upon this river has been carried up to a mill-dam, which prevents further improvement until it is removed; but since no part of the appropriation can be applied to the purchase of the right of way or paying damages, operations are deferred until special provision is made for that purpose.

No commerce existed upon the river and none has been developed by the improvement thus far made.

The Yadkin within the limits of North Carolina is entirely cut off by a narrow mountain defile of 30 feet width, through which it descends in a torrent, 50 feet in 2 miles, and has no navigable connection with its lower part, known as the Great Pee Dee; it becomes, therefore, a question

42 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

whether it can be considered navigable water of the United States, as defined by the Supreme Court.

July 1, 1882, amount available	\$17, 935 20
Amount appropriated by act passed August 2, 1882.....	25, 000 00
	<hr/> 42, 935 20
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$9, 061 88
July 1, 1883, outstanding liabilities	1, 001 43
	<hr/> 10, 063 31
July 1, 1883, amount available	32, 871 89

CAPE FEAR RIVER, FROM WILMINGTON TO FAYETTEVILLE, NORTH CAROLINA.

(Page 189.)

First appropriation, 1881. At ordinary and high stages the river is navigable by steamers drawing $3\frac{1}{2}$ feet as far as Fayetteville; at very low stages not more than 8 inches exist on some of the shoals. Expenditures for increasing the depth over the shoals have not yet been made, but navigation has been made easier and safer by the removal of logs, trees, &c.

The right held by a company to take tolls or make charges for the navigation of the river has been extinguished under authority of river and harbor act of March 3, 1881. Commerce has been benefited by being relieved from tolls.

July 1, 1882, amount available	\$15, 186 04
Amount appropriated by act passed August 2, 1882.....	30, 000 00
	<hr/> 45, 186 04
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$10, 344 60
July 1, 1883, outstanding liabilities	2, 642 85
	<hr/> 12, 987 45
July 1, 1883, amount available	32, 198 59

LILLINGTON RIVER, NORTH CAROLINA.

(Page 190.)

First appropriation, 1881. Before improvement the stream, which is not less than 12 feet deep, was not more than 40 to 45 feet wide in many places and very crooked. The completed improvement will straighten and widen the river so that steamers 125 feet long will be enabled to reach Lillington.

The benefit to commerce will be increased facilities and lower rates between Wilmington and Lillington.

July 1, 1882, amount available	\$3, 000 00
Amount appropriated by act passed August 2, 1882	3, 000 00
	<hr/> 6, 000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$2, 254 75
July 1, 1883, outstanding liabilities	644 15
	<hr/> 2, 898 90
July 1, 1883, amount available	3, 101 10

TOWN CREEK, NORTH CAROLINA.

(Page 192.)

First appropriation, 1881. Logs, trees, and sunken flat-boats have been removed from the stream. Some dredging remains to be done on a shoal having but $1\frac{1}{2}$ feet at low water, and it is expected to secure a depth of 4 feet with the present appropriation. No increase of commerce has resulted and none is expected.

July 1, 1882, amount available	\$1, 000 00
July 1, 1883, amount expended during fiscal year	1, 000 00

WATEREE RIVER, SOUTH CAROLINA.

(Page 206.)

First appropriation, 1881. The lower 8 miles of the river was almost entirely blocked by overhanging trees, and by trees, snags, and logs in its bed. A fair navigation for boats drawing 4 feet now exists on this part of the river. The work being very incomplete no known benefit to commerce has yet resulted.

July 1, 1882, amount available	\$149 69
Amount appropriated by act passed August 2, 1882.....	15, 000 00
	<hr/> 15, 149 69
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$1, 107 71
July 1, 1883, outstanding liabilities	1, 381 60
	<hr/> 2, 489 31
July 1, 1883, amount available	12, 660 38

SANTEE RIVER, SOUTH CAROLINA.

(Page 206.)

First appropriation, 1881. The only expenditures made have been for surveys and examinations, the right of way not having been secured.

July 1, 1882, amount available	\$20,627 06
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/> 40,627 06
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$93 29
July 1, 1883, outstanding liabilities	227 58
	<hr/> 420 87
July 1, 1883, amount available	40,206 19

GEORGETOWN HARBOR, SOUTH CAROLINA.

(Page 205.)

First appropriation, 1882. No expenditure has yet been made under this appropriation.

Amount appropriated by act passed August 2, 1882	\$7,000 00
July 1, 1883, amount available	7,000 00

WACCAMAW RIVER, SOUTH CAROLINA.

(Page 261.)

First appropriation, 1880. The depths over the shoals in the river below Buck's Upper Mill have been increased from 9 feet to 11½ and 12 feet.

The commerce of the river has increased since 1880 from a value of \$848,500 to \$2,370,000, the principal increase being in cotton. How much of this is due to the improvement is indeterminate.

July 1, 1882, amount available	\$612 03
Amount appropriated by act passed August 2, 1882	4,400 00
	<hr/> 5,012 03
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$2,386 31
July 1, 1883, outstanding liabilities	348 85
	<hr/> 2,735 16
July 1, 1883, amount available	2,276 87

GREAT PEE DEE RIVER, SOUTH CAROLINA.

(Page 205.)

First appropriation, 1880. The navigable depth of the river has not materially increased by the improvement, but the navigation has been made easier and safer by the removal of wrecks, logs, snags, and overhanging trees.

The value of the commerce of the river has increased since 1880 from about \$2,750,000 to about \$4,500,000, partly due to the improvement and partly to the general development of that section of country.

July 1, 1882, amount available	\$119 90
Amount appropriated by act passed August 2, 1882	6,000 00
	<hr/> 6,119 90
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	5,947 37
July 1, 1883, amount available	172 53

NAG'S HEAD, NORTH CAROLINA.—REOPENING A COMMUNICATION BETWEEN ALBEMARLE SOUND, NORTH CAROLINA, AND THE ATLANTIC OCEAN.

(Page 190.)

Fifty thousand dollars by act of August 30, 1852. Modified act of February 14, 1855. An ineffectual attempt was made to secure an opening by dredging. The work was abandoned in 1859.

OCRACOE INLET, NORTH CAROLINA.

(Page 191.)

First appropriation in 1828. Vessels drawing 9 feet could, at that time, pass in from the ocean at low water, but the channel inside was not practicable for vessels drawing more than 5 feet.

The appropriations made were applied until 1836 in deepening one of the channels from Pamlico Sound to the inlet, during which time an increase of about 3½ feet of depth was obtained with, at first, great promise of permanence. In 1836, to prevent the formation of a shoal that had begun to form at the outlet of the dredged channel, resort was had to a jetty for the concentration of the current. This, when nearly completed, was materially injured by a violent storm in August, 1837.

The continued shoaling of the dredged channel and the destruction of this jetty eventually led to the final abandonment of the work.

Between the years 1830 and 1835 the benefit to commerce was a material increase in the number of vessels seeking this outlet from North Carolina ports to the sea.

CHARLESTON HARBOR, SOUTH CAROLINA.

(Page 205.)

The first appropriation of 1852 was applied to improving the Beach Channel by dredging, but no substantial results were obtained. The appropriations from 1871 to 1876 were expended for the greater part in taking up at various points of the inner and outer harbor the wrecks of fourteen iron-clad and wooden vessels sunk during the civil war. Their removal was of benefit to commerce. In 1878 a plan was adopted for increasing the depth of water across the bar to 21 feet by means of jetties, the greatest depth being about 11½ feet.

No material benefit to commerce is expected until the two jetties shall have been further extended and raised throughout their whole lengths.

Amount appropriated by act passed August 2, 1882	\$300,000 00
July 1, 1883, amount expended during fiscal year	\$163,654 77
July 1, 1883, outstanding liabilities.....	36,877 22
	<hr/>
	200,531 99
July 1, 1883, amount available	99,468 01

ASHEPOO RIVER, SOUTH CAROLINA.

(Page 205.)

The small appropriation made in 1872 was applied to the removal of various kinds of obstructions placed in the channel during the civil war, by means of which the depth of 10 feet at low water was restored to the channel, which had diminished by these obstructions; and to that extent commerce was benefited.

ASHLEY RIVER, SOUTH CAROLINA.

(Page 205.)

The appropriations of 1880 and 1881 were applied to dredging a channel of 11 feet depth at mean low water for 10 miles above Charleston, where formerly only 9 feet existed.

The improvement chiefly benefits the several phosphate companies located above the shoals removed.

July 1, 1882, amount available	\$85 07
July 1, 1883, amount available	85 07

TOWN CREEK, SOUTH CAROLINA.

(Page 206.)

A part of the appropriation of 1871 was applied to the removal of wrecks, and directly benefited commerce by removing these impediments to navigation between Charleston and points on Cooper River.

STONO RIVER, SOUTH CAROLINA.

(Page 206.)

The unexpended balance of the appropriation of 1871 for Town Creek was expended in removing the wrecks of three vessels and a number of logs, sunk as obstructions during the civil war, and restored the navigable capacity of the inland water communication among the sea islands between Charleston and Port Royal, benefiting commerce to that extent.

WAPPOO CUT, SOUTH CAROLINA.

(Page 206.)

First appropriation, 1881. It connects Stono and Ashley rivers. Work is in progress. The object of the improvement is making a straighter channel through Wappoo Cut of 6 feet depth at mean low water. At present only 2 to 4 feet can be carried at that stage through the cut.

July 1, 1882, amount available	\$10,000 00
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	20,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$11,432 80
July 1, 1883, outstanding liabilities	5,272 00
	<hr/>
	16,704 80
July 1, 1883, amount available.....	3,295 20

SULLIVAN'S ISLAND, SOUTH CAROLINA.

(Page 205.)

The appropriation of 1880 was expended in building a jetty to protect the beach in its vicinity, and also to protect the shore end of the North Jetty of the Charleston Harbor improvement now under construction, and has served the intended purpose.

BRUNSWICK HARBOR, GEORGIA.

(Page 133.)

The first appropriation of 1836 was "for the removal of the Brunswick Bar," and was so expended.

In 1879, the date of the next appropriation, there was only 9 feet at low tide over the bar at the entrance to the harbor. The improvement since commenced and still in progress had resulted, in June, 1882, in establishing a channel of from 40 to 50 feet in width, with a minimum depth of about 13 feet at low water, and has benefited commerce by increasing the depth over the bar.

The present plan contemplates a depth of 15 feet at low tide over the bar.

July 1, 1882, amount available	\$1 47
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	25,001 47
July 1, 1882, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	24,502 57
	<hr/>
July 1, 1883, amount available	498 90

SAVANNAH RIVER AND HARBOR, GEORGIA.

(Page 134.)

The appropriations between 1826 and 1855, inclusive, were chiefly applied to the removal of wrecks sunk in the channel-way of the river below Savannah during the Revolutionary war; to dredging shoals produced by them and at other points, and in constructing works designed to throw a larger volume of water into "Front River." The result was an increase of depth at the worst places of from 7 or 8 feet at low water to 10 feet, and an increase of the available high-water depth, from Tybee Roads to the city, from about 14 to 16 or 17 feet.

The channel-way of the river below the city greatly deteriorated during the civil war, in consequence of numerous and extensive obstructions placed in it. The first three appropriations since 1872 were almost exclusively used in removing those portions of the obstructions most injurious to navigation, and to that extent commerce was benefited by the work.

The expenditures since 1874 have resulted in forming a practicable ship channel from Tybee Roads to the city of Savannah, by which about 13 feet at low water and 19 feet at high water can now be carried to the city.

Under the existing plan it is expected that at its completion, vessels drawing 22 feet will be able to reach the city wharves.

July 1, 1882, amount available	\$15,051 92
Amount appropriated by act passed August 2, 1882	200,000 00
	<hr/>
	215,051 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$116,591 21
July 1, 1883, outstanding liabilities	37,445 09
	<hr/>
	154,036 30
July 1, 1883, amount available	61,015 62

SAVANNAH RIVER BELOW AUGUSTA, GEORGIA.

(Page 135.)

First appropriation, 1881. The object of the improvement is to establish a low-river channel 5 feet deep; at present there is only from 2 to 3 feet of water upon several shoals in the channel-way.

No benefit to commerce has as yet accrued, the expenditures having been for procuring a suitable snag-boat.

July 1, 1882, amount available	\$75 18
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	25,075 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$17,660 18
July 1, 1883, outstanding liabilities	6,302 85
	<hr/>
	23,963 03
July 1, 1883, amount available	1,112 15

SAVANNAH RIVER ABOVE AUGUSTA.

(Page 135.)

First appropriation, 1880. The work so far done has resulted in straightening the channel and securing a low-river depth of 3 feet at a number of places in the river for 64 miles above Augusta, and has produced an immediate and permanent improvement to the navigation of the river, benefiting commerce to that extent.

July 1, 1882, amount available	\$247 24
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	15,247 24
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$8,471 53
July 1, 1883, outstanding liabilities	4,380 12
	<hr/>
	12,851 65
July 1, 1883, amount available	2,395 59

SAINT AUGUSTINE CREEK, GEORGIA.

(Page 134.)

This constitutes part of the inland passage between Savannah and Jacksonville. A part of the appropriation of 1879 was expended in the removal of the wreck of a heavy timber dry-dock sunk during the war to obstruct the channel. Its removal to a depth of 10 feet at low water accommodates the kind of navigation using the inland passage and constitutes the benefit to commerce.

July 1, 1882, amount available.....	\$3,417 66
July 1, 1883, amount available.....	3,417 66

DARIEN HARBOR, GEORGIA.

(Page 133.)

The appropriation of 1878 was expended in deepening two shoals in Darien River, below the town, from 8 to 11 feet at mean low water, and lower down two bars were deepened from 11 to 14 feet and from 8 to 12 feet, respectively.

An active business of shipping lumber and timber is carried on here, which has been benefited by the improvement.

ALTAMAHA RIVER, GEORGIA.

(Page 133.)

First appropriation, 1881. The work thus far done has been merely preparatory, and the greater part of the expenditure for procuring a snag-boat. Commerce has as yet derived no benefit from the proposed improvement, which is to secure a low-water channel 80 feet wide and 3 feet deep to the confluence of the Oconee and Ocmulgee, 155 miles.

July 1, 1883, amount available	\$6 10
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	15,006 10
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	137 89
	<hr/>
July 1, 1883, amount available	14,868 21

ROMERLY MARSH, GEORGIA.

(Page —.)

This forms part of the inland passage between Savannah River, Georgia, and Saint John's River, Florida. It is excessively crooked, and vessels drawing 5 feet cannot pass through on less than half tide.

The appropriation of 1882 not being deemed sufficient, work has been postponed to await further action of Congress, since the opening of only a part of the passage would be useless.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year.....	\$61 63
July 1, 1883, outstanding liabilities	2,399 33
	<hr/>
	2,460 93
July 1, 1883, amount available	7,539 07

SAINT JOHN'S RIVER, FLORIDA.

(Page 131.)

The depth on the bar at the mouth of this river has generally been about 6 feet at low tide, and the direction of the channel frequently changes under the influence of storms.

The first appropriation was made in 1852. The results of its expenditure were not permanent.

With the appropriations made from 1870 to 1878 dredging was done for temporary relief of navigation; depths from 8 to 10 feet were attained at low water, so that vessels drawing 14 feet could cross the bar; but these advantages could not be permanently secured.

Since December, 1880, operations have been carried on, designed, by means of two long jetties, to establish and permanently maintain a mid-channel depth of 15 feet at mean low water on the bar.

The works have not yet sufficiently advanced to give the new channel the required direction and depth.

July 1, 1882, amount available	\$6,771 18
Amount appropriated by act passed August 2, 1882.....	150,000 00
	<hr/>
	156,771 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$33,759 95
July 1, 1883, outstanding liabilities	48,609 72
	<hr/>
	82,369 67
July 1, 1883, amount available	74,401 51

ENTRANCE TO CUMBERLAND SOUND, GEORGIA AND FLORIDA.

(Page 228.)

First appropriation, 1880. The depth of water over the Fernandina Bar varies from 11 to 12½ feet, and a mean rise and fall of tide of 6 feet.

Operations now in progress are designed to create and maintain a ship-channel across the bar of not less than 20 to 21 feet at mean low water.

The appropriations made thus far have been too small to advance the work sufficiently to produce any marked improvement in the channel.

July 1, 1882, amount available	\$19,743 11
Amount appropriated by act passed August 2, 1882	50,000 00
	<hr/>
	69,743 11
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	68,457 26
	<hr/>
July 1, 1883, amount available	1,285 85

INSIDE PASSAGE BETWEEN FERNANDINA AND SAINT JOHN'S RIVER, FLORIDA.

(Page 259.)

Appropriations were made at intervals between the years 1828 and 1838, and chiefly applied to dredging in Amelia River and Sawpit Creek. On the reach between Fernandina and Nassau Sound there has been maintained a least low-water depth of 4 feet, which improvement is ascribed to the work done with these appropriations.

With the appropriations made since 1874 the worst shoals between Nassau Sound and Saint John's River were improved by dredging from time to time; but as there seems to be no prospect of securing any permanent benefit to commerce from the occasional expenditure of small appropriations, work has been discontinued since 1880.

July 1, 1882, amount available	\$4,434 45
July 1, 1883, amount available	4,434 45

SAINT AUGUSTINE HARBOR, FLORIDA.

(Page 131.)

The appropriations for this harbor between the years 1841 and 1852 were expended for the extension and subsequent repair and preservation of an existing sea wall.

VOLUSIA BAR, FLORIDA.

(Page 133.)

This is at the south end of Lake George, where the waters of Saint John's River discharge into the lake.

First appropriation, 1880. The improvement contemplates the establishment of a channel depth of 6 feet at low stage by means of two jetties. The depth was from 3½ to 4½ feet, and about 1 foot has thus far been gained by the works executed.

July 1, 1882, amount available	\$66 00
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,066 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	4,555 04
	<hr/>
July 1, 1883, amount available	510 96

CONNECTING THE WATERS OF INDIAN RIVER AND MOSQUITO LAGOON AT THE HAULOVER.

(Page 130.)

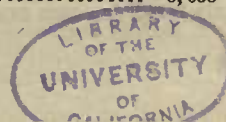
With the appropriations of 1844 and 1852 the Haulover Canal was cut to a depth of 2 feet, at that time considered sufficient for the class of boats that could be carried through Mosquito Lagoon. The work proved of benefit to the people living on the lagoon and on Indian River. The cut has greatly deteriorated from long neglect, and needs widening and deepening.

EDISTO RIVER, SOUTH CAROLINA.

(Page —.)

First and only appropriation, 1882. A snag-boat has been employed removing snags and overhanging trees over a considerable portion of the river. The work is to be continued.

Amount appropriated by act passed August 2, 1882	\$8,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,945 00
	<hr/>
July 1, 1883, amount available	6,055 00



SALKIEHATCHIE RIVER, SOUTH CAROLINA.

(Page —.)

First and only appropriation, 1882. A snag-boat has been employed for a short time on the river. The work projected comprises the removal of logs, shoals, and piles so as to make a continuous channel for 77 miles of river.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, outstanding liabilities	587 50
July 1, 1883, amount available	4,412 50

MOBILE HARBOR, ALABAMA.

(Page 117.)

The first appropriation was in 1826, and those made at intervals between that date and 1852 were applied to dredging a channel through Choctaw Pass 200 feet wide and 10 feet deep, and in the partial dredging of a channel through Dog River Bar to a depth of 10 feet. The original depth was 5½ feet at the "pass" and 8 feet at the "bar." From 1870 to 1875 the work accomplished was a channel 300 feet wide and 13 feet deep through the pass, and one of the same depth and 200 feet wide through the bar.

With the appropriation of 1879, Congress sanctioned the work now in progress of dredging the 13-foot channel to a depth of 17 feet, and extending it with a uniform width of 200 feet to the 17-foot curve in the lower bay, a distance of 26¾ miles.

The improvement as far as completed gives satisfactory evidence of permanence.

The benefit to commerce has been marked. In the fiscal year of 1881, value of exports to foreign ports, \$6,594,840; imports, foreign goods, \$659,397.

July 1, 1882, amount available	\$115,276 28
Amount appropriated by act passed August 2, 1882	125,000 00
	240,276 28
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$147,469 47
July 1, 1883, outstanding liabilities	3,070 29
	150,539 76
July 1, 1883, amount available	89,736 52

PENSACOLA HARBOR, FLORIDA.

(Page 131.)

First appropriation, 1878. The object of the improvement now in progress is the removal of a bar that has formed across the main channel of entrance to the harbor and to prevent its re-formation.

The work has not yet been carried sufficiently far to give much benefit to commerce, but it is expected that it will, during the next summer, restore the original depth of 22½ feet in the channel, which has of late years considerably shoaled.

For the fiscal year 1882, value of exports, \$2,964,896; imports, \$103,532.

July 1, 1882, amount available	\$51,859 34
Amount appropriated by act passed August 2, 1882	50,000 00
	101,859 34
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$34,884 87
July 1, 1883, outstanding liabilities	669 75
	35,554 62
July 1, 1883, amount available	66,304 72

FLINT RIVER, GEORGIA.

(Page 133.)

Improvement begun with the appropriation of 1878. Previous appropriations for the Chattahoochee and Flint jointly were applied to the former only. Before improvement the river was not navigable above Bainbridge, and only navigable for light-draught steamers at high stage from that point 36 miles to its mouth. It is now navigable at ordinary low water to a point 24½ miles above Bainbridge, and on a slight rise safely navigable for 90 miles above Albany.

There has been a decided increase in transportation to and from points accessible to the river since the improvement has been in progress.

July 1, 1882, amount available	\$2,797 21
Amount appropriated by act passed August 2, 1882	25,000 00
	27,797 21
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	16,525 68
July 1, 1883, amount available	11,271 53

CHATTAHOOCHEE RIVER, GEORGIA AND ALABAMA.

(Page 225.)

First appropriation, 1874. Before improvement the river was not navigable at low water. It is now navigable at low water to Columbus for light-draught steamers.

The work has consisted in clearing the river its entire length each year of snags and overhanging trees, and in blasting rock shoals and deepening the channel by the use of wing-dams.

The improvement is not permanent, as there is an annual accumulation of snags and other obstructions caused by the winter freshets.

There has been a large increase of commerce since the commencement of the improvement.

July 1, 1882, amount available	\$16,789 90
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	41,789 90
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	15,372 54
	<hr/>
July 1, 1883, amount available	26,417 36

APALACHICOLA RIVER AND BAY, FLORIDA.

(Page 129.)

Appropriations made between the years 1828 and 1838 were applied to removing obstructions from the river and in deepening a straight channel in the bay.

APALACHICOLA RIVER, FLORIDA.

(Page 130.)

First appropriation, 1874. Before improvement the river was obstructed by numerous snags, and at a point 50 miles above Apalachicola completely closed for a distance of 6 miles. The condition of the river is now good and available for light-draught river steamers. Snags and overhanging trees will have to be removed every season to maintain the improvement.

Value of commerce in 1874, \$181,338; in 1882, \$772,565. Increase attributed to the improvement.

July 1, 1882, amount available	\$2,129 84
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	4,129 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	806 87
	<hr/>
July 1, 1883, amount available	3,322 97

APALACHICOLA BAY, FLORIDA.

(Page 130.)

First appropriation, 1880. Before improvement the channel of entrance from the bay to the river at the wharves of Apalachicola had a depth of 4 feet at ordinary high tide; it is now 9 feet. The adopted plan is for a channel 100 feet wide and 11 feet deep.

Commerce in lumber and hewn timber is increasing rapidly, and will continue to do so with increased facilities.

July 1, 1882, amount available	\$94 95
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	25,094 95
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$22,227 56
July 1, 1883, outstanding liabilities	2,209 34
	<hr/>
	24,436 90
July 1, 1883, amount available.....	658 05

TAMPA BAY, FLORIDA.

(Page 132.)

First appropriation, 1880. Before improvement the channel from the bay up to wharves at Tampa was only navigable at ordinary high tide for vessels drawing 5 feet. The expenditure so far has secured a channel 60 feet wide and 9 feet deep. The width is to be increased to 150 feet over the bar and 200 feet in the river.

Annual value of commerce benefited, \$500,000. Fifteen thousand head of cattle are annually shipped to Cuba.

Amount appropriated by act passed August 2, 1882	\$20,000 00
July 1, 1883, amount expended during fiscal year	20,000 00

PEAS CREEK, FLORIDA.

(Page 131.)

First appropriation, 1881. Navigable before improvement for light-draught river steamers during high water, but difficult and dangerous from snags and overhanging trees, and not used. The expenditures so far have made a few miles safely navigable for light-draught river steamers.

Work has not been carried sufficiently far to result in much benefit to commerce. No statistics obtainable.

July 1, 1882, amount available	\$4,576 67
Amount appropriated by act passed August 2, 1882	4,000 00
	<hr/>
	8,576 67
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	4,512 84
	<hr/>
July 1, 1883, amount available	4,063 83

KEY WEST HARBOR, FLORIDA.

(Page —.)

First appropriation, 1882. Improvement begun, but no expenditures have yet been made. The improvement contemplated is the deepening of the northwest channel of entrance from its present depth of 11 feet at mean low water, which is not sufficient for present commercial purposes, to 17 feet; the object being a saving of distance for all vessels plying between this and the Gulf ports.

In 1881 vessels entered and cleared—foreign ports 677, domestic, 249.

Amount appropriated by act passed August 2, 1882	\$25,000 00
July 1, 1883, amount expended during fiscal year	1,426 88
	<hr/>
July 1, 1883, amount available	23,573 12

OCHLAWAHA RIVER, FLORIDA.

(Page 131.)

An appropriation of \$10,000 was made in 1835 for clearing this stream from the Saint John's to near Camp King, for the transportation of provisions and military stores for the garrison at that post.

Only about one-third of this was expended under the Quartermaster's Department, United States Army. The extent of the improvement made is not known.

OCHLOCHNEY RIVER, FLORIDA.

(Page 131.)

The appropriation for 1833 for this river was expended in the removal of logs from the channel and impending trees from the banks. The extent of the improvement and its benefit to commerce are not known.

MANATEE RIVER, FLORIDA.

(Page —.)

First appropriation, 1882. Improvement begun but no expenditures have yet been made. The improvement contemplates the deepening of the bar at the mouth, and a portion of the channel of the river from the present navigable depth of 8 feet at mean low water to 13 feet at mean low water, to Shaw's Point about 2 miles above the mouth.

Value of products shipped from September 1880, to July 1, 1881, \$138,462; were also shipped annually about 6,000 head of cattle.

Amount appropriated by act passed August 2, 1882	\$12,000 00
July 1, 1883, amount expended during fiscal year	\$3,038 99
July 1, 1883, outstanding liabilities	176 23
	<hr/>
	3,215 22
July 1, 1883, amount available	8,784 78

CALOOSAHATCHEE RIVER, FLORIDA.

(Page —.)

First appropriation, 1882. Improvement begun but no expenditures have yet been made. The project adopted is the deepening of the channel of the river from its mouth to Fort Myers, a distance of 14 miles, to 7 feet at ordinary low water for a width of 100 feet as far as funds will admit.

Fort Myers is the principal trading point on the river. Population sparse; trade insignificant; no statistics.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	3 59
	<hr/>
July 1, 1883, amount available	4,996 41

SUWANEE RIVER, FLORIDA.

(Page 132.)

First appropriation, 1880. The object of the improvement is to afford a channel of entrance into the river from Suwanee Bay of navigable width and 5 feet deep at mean low water, and to give a channel 50 feet wide and 4 feet deep as far up the river as Ellaville Railroad crossing, at mouth of the Withlacoochee. Before improvement the channel across the bar was about 3 feet deep, and the least depth up the river $1\frac{1}{2}$ feet. Expenditures so far have only accomplished a channel of the required depth across the bar, and the improvement has not as yet afforded benefit to commerce. Several million feet of pine, cypress, and cedar timber have been shipped annually, and the quantity is increasing.

July 1, 1882, amount available.....	\$204 01
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	5,204 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	414 34
	<hr/>
July 1, 1883, amount available.....	4,789 67

CHOCTAWHATCHEE RIVER, FLORIDA AND ALABAMA.

(Page 225.)

Appropriations of 1832 and 1833 and for the Choctawhatchee and Holmes rivers in 1884, was applied to clearing the rivers of snags and overhanging trees. The present improvement was begun with the appropriation of 1874. The work done on this river from its mouth, 187 $\frac{1}{2}$ miles to Geneva, Alabama, has opened navigation for steamers drawing 4 $\frac{1}{2}$ feet water to that point. The improvement of the river above Geneva for high-water navigation has been carried up as far as Clay Bank Creek, 60 miles. Before improvement navigation was by flat-boats only. Light-draught steamers now ascend to Geneva the year round. A considerable reduction of freight on cotton is reported as resulting from the improvement.

July 1, 1883, amount available.....	\$428 93
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	20,428 93
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	11,268 97
	<hr/>
July 1, 1883, amount available.....	9,159 96

ESCAMBIA RIVER, ALABAMA AND FLORIDA.

(Page 229.)

Application of the appropriation of 1833 and 1836 unknown.

The present improvement was begun with the appropriation of 1880. The benefit resulting to commerce has been the dredging of a channel over the bar at the mouth of the river from the original depth of 1 foot 9 inches, to 5 $\frac{1}{2}$ feet at mean low water, 100 feet wide, greatly facilitating the transport of the large amount of lumber which is annually shipped out of the river and constitutes the principal part of its commerce. The improvement is incomplete.

July 1, 1882, amount available.....	\$3,360 43
July 1, 1883, amount expended during fiscal year.....	3,360 43

CONECUH RIVER, ALABAMA AND FLORIDA.

(Page —.)

First appropriation, 1882. Work of improvement has been commenced, but not carried sufficiently far to benefit commerce.

The river requires to be cleared of snags, logs, and overhanging trees to make it passable for steamers.

Amount appropriated by act passed August 2, 1882.....	\$12,000 00
July 1, 1883, amount expended during fiscal year.....	3,377 94
	<hr/>
July 1, 1883, amount available.....	8,622 06

CAHABA RIVER, ALABAMA.

(Page —.)

First appropriation, 1882. The river is closed to navigation by snags, logs, overhanging trees, &c. Preparations have been made to commence the work of improvement.

It is estimated that the river, if open, would afford cheap transportation to about 50,000 bales of cotton. It would also open a water route from the Alabama coal fields to the Gulf.

Amount appropriated by act passed August 2, 1882.....	\$20,000 00
July 1, 1883, amount expended during fiscal year.....	8,924 94
	<hr/>
July 1, 1883, amount available.....	11,075 06

TAILLAPOOSA RIVER, ALABAMA.

(Page —.)

First appropriation, 1882. Preparations have been made to commence the work of opening the river to navigation, which will consist in the removal of snags, logs, overhanging trees, and other impediments to high-water navigation.

The estimated principal products for which an improved river would furnish transportation are annually about 13,000 bales of cotton, and the product of 6,000 more manufactured, with return freights amounting to about \$500,000.

Amount appropriated by act passed August 2, 1882	\$15,000
July 1, 1883, amount available	15,000

ALABAMA RIVER, ALABAMA.

(Page 117.)

First appropriation, 1878. The benefit resulting from the expenditures for this improvement is increased safety to river steamers, greater regularity, and quicker trips, with saving to the commerce of the river, which is considerable. In the fiscal year ending June 30, 1882, the reported value of commerce was \$4,689,835.

The work has consisted in the removal of snags and overhanging timber, and the improvement of the worst bars by dams and wing dams, the object being to afford a channel 200 feet wide and 4 feet deep at low water.

July 1, 1882, amount available	\$6,998 47
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	26,998 47
July 1, 1882	15,491 08
	<hr/>
July 1, 1883, amount available	10,607 39

TOMBIGBEE (BELOW COLUMBUS) AND BLACK WARRIOR RIVERS, ALABAMA AND MISSISSIPPI.

(Page 261.)

First appropriation, 1872. Before improvement this portion of the Tombigbee was navigable at low water only 95 miles of 366 miles of its length, and the Black Warrior was not navigable at low water. The work has consisted in the removal of snags, logs, and overhanging trees, the protection of banks against washing, and the improvement of the worst shoals by wing dams. The improvement is not completed, but has been carried far enough to make navigation safe, to enable boats to make quicker trips and during a lower stage of water than formerly, with an increase of the length of the boating season. A small annual expenditure will be required to keep the rivers in their improved condition.

During the fiscal year ending June 30, 1882, on the Warrior the average down freight of cotton was 15,000 bales; on the Tombigbee, 45,557 bales.

July 1, 1882, amount available	\$7,932 69
Amount appropriated by act passed August 2, 1882	30,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	37,932 69
July 1, 1882	28,116 10
	<hr/>
July 1, 1883, amount available	9,816 59

TOMBIGBEE RIVER, ABOVE COLUMBUS, MISSISSIPPI.

(Page 261.)

First appropriation, 1878.* Before improvement there was no navigation on this portion of the river. The work has consisted principally in the removal of snags and overhanging trees, &c. The benefit to commerce resulting from the expenditure is a saving on transportation of plantation supplies and products to and from points accessible to the river, between Columbus and Fulton, 144 miles.

A small annual appropriation will be required to maintain the improvement.

During 1882 shipments of cotton, down the river from different points, amounted to 21,786 bales.

July 1, 1882, amount available	\$4,373 40
Amount appropriated by act passed August 2, 1882	1,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	5,373 40
July 1, 1882	4,548 56
	<hr/>
July 1, 1883, amount available	824 84

* \$4,667 of the appropriation of 1873 were expended upon this part of the river.

PASCAGOULA RIVER, MISSISSIPPI.

(Page 170.)

The appropriations of 1827 and 1828 were applied to deepening the channel at the mouth of the river, but with no permanent result. In 1867-'70 a canal was cut across the bar by private parties, under a charter from the State, and \$5,000 were also expended from other sources. The present improvement was begun with the appropriation of 1878, at which time but 3 feet water could be carried into the river. The expenditures have resulted in deepening the channel of entrance 7 feet at mean low water, and in improving the river for 50 miles above the mouth, by the removal of snags and overhanging trees, &c., by which navigation is made safe, at any stage of water, for small steamers. An annual expenditure will be required for maintenance.

Custom-house returns show a decided increase of trade since 1879.

July 1, 1882, amount available	\$2,345 72
Amount appropriated by act passed August 2, 1882	8,000 00
	<hr/>
	10,345 72
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	6,987 41
	<hr/>
July 1, 1883, amount available	3,358 31

NOXUBEE RIVER, MISSISSIPPI.

(Page 170.)

First appropriation, 1880. Improvement in progress. The benefit to commerce resulting from the improvement is the opening of a water route for a large section of the country formerly dependent upon a railroad for transportation.

Steamers are now making use of the river, which has been closed to them for thirty years. The work has consisted in the removal of snags, overhanging trees, fish-traps, and dams, but is not susceptible of permanent improvement.

Shipments, when the work now in progress is completed, are estimated at 16,000 to 18,000 bales of cotton, with an equal value of other products and return supplies.

July 1, 1882, amount available	\$1 55
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,001 55
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	9,356 24
	<hr/>
July 1, 1883, amount available	645 31

HARBOR AT BILOXI, MISSISSIPPI.

(Page —.)

First appropriation, 1882. Amount appropriated not being sufficient to warrant the commencement of work, its expenditure has been deferred.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	11 45
	<hr/>
July 1, 1883, amount available	4,988 55

OLD TOWN CREEK, MISSISSIPPI.

(Page —.)

First appropriation, 1882. Work of improvement will be commenced as soon as the stage of water in the river will admit. By the removal of snags, fallen timber, and overhanging trees the stream can be made safely navigable for 30 miles from the mouth.

Cotton shipments from railroad stations were increased from 10,000 bales in 1867 to 34,000 in 1880, and the charges are high. It is to reduce these by a competing route that the improvement is desired.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount available	3,000 00

LA GRANGE BAYOU, FLORIDA.

(Page —.)

First appropriation, 1882. No expenditure has yet been made, the appropriation being too small to accomplish any good results.

Amount appropriated by act passed August 2, 1882	\$2,000 00
July 1, 1883, amount available	2,000 00

SAINT MARK'S RIVER, FLORIDA.

(Page 132.)

Appropriations made between the years 1829 and 1834 were expended in removing the obstructions in the harbor, consisting of oyster bars and mud shoals, and in opening the river for 14 miles.

The appropriation of 1844 was expended in clearing 5 miles of the river of snags and impending trees.

At the time of these appropriations Saint Mark's was a place of some commercial importance. The trade of the port has declined, with but little prospect of its revival.

CHIPOLA RIVER, FLORIDA.

(Page 130.)

Appropriations, 1835, \$5,000; 1836, \$4,000.

Improvement in charge of Quartermaster's Department in 1835. Length of river to be improved, 125 miles. No information at hand of the progress or results of the work or of the amount expended.

PASS AU HERON, ALABAMA.

(Page 118.)

The result of the work accomplished under the appropriation of 1828 for deepening the channel of Pass au Heron, between the eastern end of Dauphin Island, at the Main, near Mobile Bay, is not known. A part of the appropriation only was expended.

HARBOR AT CEDAR KEYS, FLORIDA.

(Page 130.)

First appropriation, 1872. The improvement consists in deepening the channel over the outer bar by dredging from $8\frac{1}{2}$ feet to 11 feet at ordinary high tide, straightening the channel, and the removal of a wreck. The work has been done at a considerable reduction in cost on the original estimate, but may require a further expenditure for its preservation.

It has been attended and followed by a large and constant increase in the commerce and prosperity of the port.

The town is the terminus of the Atlantic and Gulf Transit Railroad.

WITHLACOOCHEE RIVER, FLORIDA.

(Page 133.)

First appropriation, 1881. Before improvement not navigable on account of accumulation of snags and overhanging trees, &c.

Work incomplete and in progress, but not advanced sufficiently to be of benefit to commerce.

No commercial statistics reported.

July 1, 1882, amount available.....	\$3,931 63
July 1, 1883, amount expended during fiscal year.....	3,931 63

SABINE PASS AND BLUE BUCK BAR, TEXAS.

(Page 209.)

Improvement commenced with appropriation of 1875. With those from this date to 1881 channels were dredged over the long bar at the entrance to Sabine Pass from 12 to 16 feet deep, where the original depth was but 7 feet, and through a shell reef in Sabine Pass and through another at Blue Buck Bar, near the junction of Sabine Pass with Sabine Lake. The channels over the shell reefs have not refilled, but those over the outer bar did not prove self-maintaining, and are now filled.

In 1882 a project was adopted for the construction of jetties by which it is expected to maintain a permanent 20-foot channel over the bar.

No benefit to commerce has resulted, as this new work has only been commenced.

The value of domestic exports passing out of Sabine Pass is estimated at about \$1,505,000.

July 1, 1882, amount available.....	\$151,296 06
Amount appropriated by act passed August 2, 1882.....	150,000 00
	<hr/>
	301,296 06
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$133,960 47
July 1, 1883, outstanding liabilities.....	14,413 36
	<hr/>
	148,373 83
July 1, 1883, amount available (under contract).....	152,922 23

SABINE RIVER, TEXAS.

(Page 210.)

In 1878, before improvement, the depth on the bar at the mouth of Sabine River was $3\frac{1}{2}$ feet. It was dredged to 6 feet, and has now about $5\frac{1}{2}$ feet. By cut-offs and the removal of snags and overhanging trees a marked improvement was made in the river during high stages. During low water it is only navigable a short distance above Orange. No statistics are at hand to show that any increase of commerce on the river has resulted from this work. In 1856 the State of Texas appropriated over \$50,000, and in 1874 a large amount of State land, for the improvement of this river. The river is not susceptible of permanent improvement.

July 1, 1882, amount available.....	\$11,805 09
Amount appropriated by act passed August 2, 1882.....	4,000 00
	<hr/>
	15,805 09
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	11,258 52
July 1, 1883, amount available.....	4,546 57

NECHES RIVER, TEXAS.

(Page 209.)

Before improvement, in 1878, the bar at the mouth of the river had a depth of 2½ feet. It was dredged to 5 feet, and has now about 4½ feet depth. Logs, snags, &c., were removed as far up the river as Bevilspout, the head of high-water navigation. It is not known that this improvement of navigation has been of any benefit to commerce. This river is not susceptible of permanent improvement.

July 1, 1882, amount available	\$281 44
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,281 44
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882 (surveys)	124 59
	<hr/>
July 1, 1883, amount available	5,156 85

GALVESTON HARBOR, TEXAS.

(Page 208.)

In 1870, before any expenditure was made for the improvement of this harbor, the inner and outer bars limited the commerce of the port to vessels drawing not more than 11 feet.

The inner bar has been removed by the joint work of the city and the General Government to a navigable depth of 20 feet.

The object of the improvement in progress on the outer bar, which dates from 1880, is the contraction of the outlet so as to force the outflow into a narrow channel directed upon the bar to effect its removal.

The work so far accomplished gives strong indications of a successful result. An increase of 2 feet in the depth across the bar has already resulted from the expenditures of the last three years, and the saving to commerce in the item of lighterage alone has been estimated at \$400,000, at least, during the past year.

Amount appropriated by act passed August 2, 1882	\$300,000 00
July 1, 1883, amount expended during fiscal year	\$257,249 88
July 1, 1883, outstanding liabilities	10,509 35
	<hr/>
	267,759 23
July 1, 1883, amount available	32,240 77

SHIP CHANNEL IN GALVESTON BAY.

(Page 208.)

First appropriation in 1872. This and the appropriations of 1874 and 1875 were expended in making a channel through Redfish Bar. The present improvement was begun in 1878. An effort is being made to secure a channel 12 feet deep, where but 8 feet formerly existed, to Morgan's Cut, a distance of about 30 miles.

It having become apparent during the progress of this improvement that the work could not be made permanent within a reasonable cost, and that the cost of its maintenance would be excessive, further expenditure upon it has been deferred to await the action of Congress thereon.

July 1, 1882, amount available	\$88,466 13
Amount appropriated by act passed August 2, 1882	94,500 00
	<hr/>
	182,966 13
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	23,095 63
	<hr/>
July 1, 1883, amount available	159,870 50

BUFFALO BAYOU, TEXAS.

(Page 208.)

This is a continuation of the above. The work is yet incomplete, but has so far benefited the commerce to Houston as to permit uninterrupted navigation during the past low-water season.

A navigable channel of about 6 to 8 feet has been improved to 10 and 12 feet, which will be further improved by widening.

July 1, 1882, amount available	\$860 98
Amount appropriated by act passed August 2, 1882	50,000 00
	<hr/>
	50,860 98
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$22,937 99
July 1, 1883, outstanding liabilities	24,762 17
	<hr/>
	47,700 16
July 1, 1883, amount available	3,160 82

TRINITY RIVER, TEXAS.

(Page 210.)

Work was begun with the appropriation of 1878. But little money has been expended on this river. The obstructions to navigation were snags below Liberty and a bar at the mouth. Snags have been removed and the bar dredged. This bar will probably be dredged again with the balance of funds on hand.

The benefit to commerce is commensurate with the expenditure.

July 1, 1882, amount available.....	\$6,630 91
Amount appropriated by act passed August 2, 1882.....	8,000 00
July 1, 1883, amount available.....	14,630 91

MOUTH OF BRAZOS RIVER, TEXAS.

(Page 207.)

This improvement was begun with the appropriation of 1880. In 1881 there were 5.6 feet on the bar at mean low tide. There is now 8.5 feet, due to jetty now under construction, which as yet is not more than half completed.

But little commerce has been benefited by the improvement so far. The improvement is in the interest of the increasing sugar and cotton products of that vicinity.

July 1, 1882, amount available.....	\$2,240 97
Amount appropriated by act passed August 2, 1882.....	50,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	52,240 97 50,730 98
July 1, 1883, amount available.....	1,509 99

PASS CAVALLO, INLET TO MATAGORDA BAY, TEXAS.

(Page 258.)

The first appropriation was made in 1876, but the work was deferred until a sufficient sum had accumulated to warrant its commencement. The navigable channel over the bar of 8 feet has remained unchanged, as but little progress has as yet been made in the improvement projected of obtaining a 12-foot channel across the bar.

During the fiscal year ending June 30, 1882, 147 vessels, with a tonnage of 140,697, entered and cleared at the custom-house at Indianola, in addition to the many vessels not obliged to report.

July 1, 1882, amount available.....	\$5,000 00
Amount appropriated by act passed August 2, 1882.....	60,000 00
July 1, 1883, outstanding liabilities.....	65,000 00 60,000 00
July 1, 1883, amount available.....	5,000 00

ARANSAS PASS AND BAY, CORPUS CHRISTI, TEXAS.

(Page 207.)

The first appropriation was in 1879, at which time the bar had a depth of 5 to 5½ feet only. The project for the work contemplates a depth of 12 feet and the protection of the head of Matagorda Island from abrasion.

The work of improvement as far as it has progressed has created a depth of 8½ feet on the bar, and a steady increase of depth is developing.

The benefit to commerce as reported by the collector of customs at Corpus Christi has been a business during the year ending June 30, 1882, three times greater than in any previous year, due to the improved condition of the channel over the bar.

July 1, 1882, amount available.....	\$448 53
Amount appropriated by act passed August 2, 1882.....	100,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	100,448 53 \$62,021 61
July 1, 1883, outstanding liabilities.....	36,371 16
July 1, 1883, amount available.....	98,392 77 2,055 76

HARBOR AT BRAZOS SANTIAGO, TEXAS.

(Page 207.)

First appropriation, 1880. But little has as yet been expended upon this improvement. The natural depth of 7½ feet at high tide remains unchanged across the bar. A beginning only has been made towards increasing it.

No benefit to commerce can be expected until the work is further advanced.

The imports and exports of the customs district of Brownsville have averaged for the last five years from \$4,000,000 to \$5,000,000 per annum.

July 1, 1882, amount available.....	\$3,210 75
Amount appropriated by act passed August 2, 1882.....	60,000 00
	<hr/> 63,210 75
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$3,060 75
July 1, 1883, outstanding liabilities.....	150 00
	<hr/> 3,210 75
July 1, 1883, amount available.....	60,000 00

PROTECTION OF THE BANK OF THE RIO GRANDE AT FORT BROWN, TEXAS.

(Page 209.)

No further appropriation is recommended for this work, since the cost of any effective protection from the encroachment of the river would exceed the value of the public buildings whose destruction is threatened. It would be more expedient to move the buildings to a place of security.

July 1, 1882, amount available	\$230 04
Amount appropriated by act passed August 2, 1882	1,000 00
	<hr/> 1,230 04

COLORADO RIVER, TEXAS.

(Page 208.)

The appropriation of 1852 was applied to opening navigation in the region of the Colorado Raft. Instead of removing the raft and opening the navigation of the main river, for which the appropriation was inadequate, a lateral channel was opened through a series of lakes, which proved entirely successful.

MOUTHS OF THE MISSISSIPPI.

(Page 237.)

Under the first appropriation for the improvement of the mouths of the Mississippi, in 1837, the plan of dredging with buckets was adopted, and a powerful machine constructed and set to work, but it was not fairly tested for want of further appropriation.

The next appropriation was in 1852, under which a contract was made for a channel through the bar at Southwest Pass, 18 feet deep and 300 feet wide, by stirring up the bottom. No further appropriation having been made until 1856, as a consequence the 18-foot channel, completed in 1853, filled up.

With the appropriation of 1856 a jetty was built, by contract, about a mile long on the western side of the Southwest Pass, composed of a single row of pile planks, strengthened at intervals by piles. Portions of this jetty having been carried away by storms, the contractors abandoned their plan and were permitted to resort to the stirring-up method, by which they opened, in 1858, channels in the Southwest Pass and in Pass à l'Ontre 18 feet deep, which, as long as the process continued, preserved this depth.

Further operations were interrupted by the civil war.

Appropriations, made between the years 1866 and 1878, were expended in constructing and operating two dredge-boats, specially designed for deepening the bars by stirring. With these two boats an average depth of about 18 feet was maintained, either in the Southwest Pass or in Pass à l'Ontre, until 1878, when the improvement of South Pass by jetties having obtained a depth of 18 feet, further operations of the dredge-boat were discontinued.

The river and harbor act of March 3, 1875, contained provisions authorizing James B. Eads and associates to build jetties and other works on the South Pass, with the view of obtaining and maintaining deep water over the bar at the mouth of the Pass and through the Pass into the river. The time of completion was limited, and payments were to be made upon the attainment of certain specified depths and widths of channel, the ultimate object being to obtain a channel 30 feet in depth and 300 feet in width.

For this work they were to receive \$5,250,000; the final \$1,000,000 not to be paid, however, until the last-mentioned channel had been maintained for ten years, when they were to receive \$500,000, the other \$500,000 to be paid when the same channel had been maintained for ten additional years. In addition to the above they were to be paid \$100,000 per annum for maintaining this channel, as well as interest at 5 per cent. on the final \$1,000,000.

The construction of the jetties was commenced in 1875, and in 1879 a channel 26 feet deep was obtained through the jetties and the Pass.

Congress, by acts of June 19, 1878, and March 3, 1879, amended the original act of March 3, 1875, so that the contractors were only to obtain a channel 26 feet deep and 200 feet wide at bottom, and having through it a central depth of 30 feet "without regard to width."

The law in its present form is interpreted to mean that a channel 26 feet deep, 200 feet wide at bottom, having a central depth of 30 feet without regard to width, must be maintained through the jetties and into the Gulf; and a channel 26 feet in depth, of *navigable width*, must be maintained through the Pass from the jetties into the river proper.

These channels to be maintained for twenty years, dating from July 8, 1879, the contractors to be paid the amounts heretofore stated.

Thus far, since July 8, 1879, this channel has been maintained, except for seventy days in all in which there was a deficient channel.

There has been no deficiency since September, 1882.

MISSISSIPPI RIVER FROM CAIRO TO THE PASSES.

(Page 237.)

MISSISSIPPI RIVER COMMISSION.

(Page 246.)

The plan of improvement adopted by the Commission consists essentially in seeking to increase the navigable depths at low water by narrowing the width at that stage to about 3,000 feet, it being found that where this width is exceeded had navigation as a rule exists. To accomplish this result, recourse is had to light permeable structures erected in the river-bed and designed, by checking the velocity of the current, to induce deposits of sediment on those portions of the bed which it is proposed to reclaim from the river. By a continuance of this action, which merely imitates the natural processes constantly at work, it is expected that these deposits will ultimately be raised to the level of the normal banks. When this is done the river will have a nearly uniform width, and the tendency which now exists to form shoals in the wide shores will be done away with.

The principle proposed of contracting the water-way to secure increased depth is in no sense experimental, but has been successfully carried out on many streams in this country and abroad. The special methods proposed have also passed beyond the experimental stage; they have received practical tests at various points on the Mississippi and Missouri rivers, and even the recent work done by the Commission already shows their correctness.

HARBOR OF NEW ORLEANS.

(Page 237.)

This work was designed to protect the wharves and harbor of the city from the incursions of the river. It was begun in 1878; the plan adopted was recommended by a Board of Engineers convened at the request of the city authorities. Great delays during the prosecution of the work was occasioned by the crowded state of the wharves at points where the work was being carried on, and numerous other causes incidental to new and experimental work. What was done failed in its object, which led to its discontinuance in September, 1881.

The river and harbor act of 1882 provides for including this improvement in the general plan under the Mississippi River Commission.

No benefit to commerce resulted from expenditures made.

MEMPHIS HARBOR, TENNESSEE.

(Page 237.)

Work has been going on at this point since 1878, the object being to stop the caving along the upper part of the city front. The means of protection used (brush mattresses) have been quite successful.

VICKSBURG HARBOR, MISSISSIPPI.

(Page 237.)

First appropriation, 1878. Originally work was entirely confined to holding of Delta Point by revetment, the object being to prevent any further recession of the deep water of the river from the harbor proper. The work has been in the main successful.

The work which is now being prosecuted under the Mississippi River Commission contemplates the excavation of a basin in front of the town to be connected by an open cut with deep water in the river.

NATCHEZ AND VIDALIA, MISSISSIPPI.

(Page 237.)

The main object of this improvement, which has been carried on since 1880, has been to arrest the caving of banks in Giles and Marengo bends, which would ultimately allow the river to cut through a narrow neck of land and destroy the landing at Natchez and Vidalia. These are the two best harbors on the river below Cairo, and though no work is actually needed in the immediate vicinity, their existence depends upon the security of the work in the bends above.

PEARL RIVER FROM JACKSON TO CARTHAGE, MISSISSIPPI.

(Page 171.)

First appropriation, 1879. The river is much obstructed by logs, snags, drift, standing trees in the water, and overhanging trees on the banks. The work in progress is for obtaining a navigable channel of 5 feet at low water. It is not considered permanent, as the obstructions are liable to re-form at any time.

The country tributary to this portion of the river produces a large amount of cotton, and the opening of the river to navigation is of great importance to the inhabitants of its valley.

Amount of commerce to be benefited unknown.

July 1, 1882, amount available	\$15,398 34
Amount appropriated by act passed August 2, 1882.....	2,500 00
	<hr/>
	17,898 34
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	97 58
	<hr/>
July 1, 1883, amount available	17,800 76

PEARL RIVER BELOW JACKSON, MISSISSIPPI.

(Page 171.)

First appropriation, 1880. The natural channel was much obstructed by snags, sunken logs, rafts, standing trees in the water, and overhanging trees on the banks. The object of the improvement is to obtain a channel of navigable width and 5 feet deep at low water for a distance of 315 miles to the mouth of the river. The river has been cleared by contract for 195 miles below Jackson, and the work is being continued by hired labor. The improvement is not permanent. A snag-boat will probably be required for some period of each year to keep the channel clear.

Principal shipments on the river are cotton and lumber.

For a great part of its length it is the only means of communication. The benefit to commerce from the improvement will be the reduction of the cost of freight.

No commercial statistics at hand.

July 1, 1882, amount available	\$52,924 92
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	67,824 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$57,239 99
July 1, 1883, outstanding liabilities.....	1,228 42
	<hr/>
	58,468 41
	<hr/>
July 1, 1883, amount available	9,456 51

AMITÉ RIVER, LOUISIANA.

(Page 140.)

First appropriation, 1880. The river is obstructed by snags, sunken logs, standing trees in the water, and overhanging trees on the banks.

The object of the improvement is to obtain a channel of navigable width and 5 feet deep at low water.

Work is in progress, under a contract, covering 40 miles of the river above its junction with Bayou Manchac.

The commerce to be benefited is important, as the river is bordered by plantations mostly cultivating cotton, besides which the principal products are lumber and sugar.

The annual value of commerce before improvement was reputed to be \$250,000.

No recent statistics at hand.

July 1, 1882, amount available	\$12,697 74
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	8,164 64
	<hr/>
July 1, 1883, amount available	4,533 10

VERMILLION RIVER, LOUISIANA.

(Page 142.)

First appropriation, 1880. A navigable channel has been obtained on about 50 miles of the river by the removal of snags, rocks, and overhanging trees, and a channel opened to Vermillion Bay at the mouth of the river.

The improvement benefits the commerce of Vermillionville, Abbeville, and the surrounding country.

Amount of trade unknown.

July 1, 1882, amount available	\$4,727 68
Allotment from examinations and surveys	253 32
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	4,981 00

TANGIPAHOA RIVER, LOUISIANA.

(Page 142.)

First appropriation, 1872, which was expended in clearing the river of snags, rafts, and leaning trees for 16 miles from its mouth.

With subsequent appropriations since 1880, the improvement has been continued for about 50 miles up stream. The work is not permanent, as the obstructions are liable to reform.

60* APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The trade of the river is in lumber, cotton, poultry, vegetables, and fruit to New Orleans. Amount unknown. Benefit to commerce local.

July 1, 1882, amount available	\$1,991 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	7 26
July 1, 1883, amount available	1,983 75

TECHEFUNCTE RIVER, LOUISIANA.

(Page 141.)

The first appropriation of 1872 was applied to the removal of a wreck that obstructed navigation, and resulted in restoring ample depth of water and sufficient width of channel to that part of the river.

Subsequent appropriations, since 1880, have been applied to removal of a bar at the mouth of the river, and of snags and overhanging trees as far up as Covington. The work is not considered permanent.

Amount of trade unknown, but small.

The benefit to commerce entirely local.

July 1, 1882, amount available	\$1,042 24
Amount appropriated by act passed August 2, 1882	1,500 00
	2,542 24
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	88 00
July 1, 1883, amount available	2,454 24

HARBOR ON LAKE PONTCHARTRAIN, LOUISIANA.

(Page 142.)

An appropriation of 1852 was expended in the construction of a wooden breakwater 1,500 feet long in front of the Pontchartrain Railroad wharf to form a harbor of refuge. No subsequent appropriation having been made for its preservation it has gone to decay. The piles upon which the structure rested are still standing sound to low-water line, but decayed above.

There being no harbors on the southern shore of the lake into which vessels can run for refuge, such a work is still a matter of importance.

TICKFAW RIVER, LOUISIANA.

(Page 142.)

First appropriation, 1881. The natural channel is much obstructed by snags and overhanging trees. The improvement in progress is to obtain a channel of navigable width and depth for a distance of 26 miles up stream. The improvement will not be a permanent one, as the obstructions are liable to reform. The benefit to commerce is local, and principally to facilitate the floating of timber. Amount of trade unknown.

July 1, 1882, amount available	\$1,915 26
Amount appropriated by act passed August 2, 1882	2,000 00
	3,915 26
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,919 90
July 1, 1883, amount available	1,995 36

BAYOU TECHE, FROM SAINT MARTINSVILLE TO PORT BARRE, LOUISIANA.

(Page 141.)

First appropriation, 1880. The object of this improvement, which is in progress, is to secure a low-water navigation by clearing the river of snags, logs, and impending trees, and the construction of inexpensive needle dams and locks.

The benefit to commerce is important. More sugar is produced in the Teche country than in any other equal area in the State. The commerce of the Teche is very large, as the entire supplies of the best portion of Louisiana are received by this route.

July 1, 1882, amount available	\$19,464 65
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$3,724 60
July 1, 1883, outstanding liabilities	88 67
	3,813 27
July 1, 1883, amount available	15,651 38

CONNECTION OF BAYOU TECHE WITH GRAND LAKE AT CHARENTON, LOUISIANA.

(Page 141.)

First appropriation, 1881. The plan of improvement contemplates the construction of a canal. The work has been delayed by the necessity of acquiring the right of way for the work. This has been secured, and the improvement is about being commenced.

The commerce to be benefited is large. The sugar and cotton raised in the Teche country,

and that carried down the Teche from the west, will have a route to market shorter by 75 miles than at present, and a low-water depth of at least $1\frac{1}{2}$ feet greater.

July 1, 1882, amount available.....	\$24,226 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$1,296 70
July 1, 1883, outstanding liabilities.....	25 00
	<hr/>
	1,321 70
July 1, 1883	<hr/>
	22,904 30

BAYOU BLACK, LOUISIANA.

(Page 140.)

First appropriation, 1881. Navigation from Morgan City, at the junction of Bayou Boeuf and Berwick's Bay, is up the Boeuf $8\frac{1}{2}$ miles to the Chêne, and down the Chêne 2 miles to the mouth of Bayou Black, thence 31 miles up to an old canal, now closed, half a mile long, cut across to the town of Houma, in Bayou Terrebonne.

From Morgan City to the mouth of the Black there is a 10-foot navigation, with ample width. The obstructions on the Black are, on the lower river, overhanging trees and logs, and on the upper, willows, brush, and grass, nearly across the channel. The improvement in progress is to obtain a channel 50 feet wide and 6 feet deep to Houma.

In 1880 the products on the Black were about 5,000 hogsheads of sugar, and large crops of rice, corn, and potatoes; but the stream is of great importance as a natural link in the chain of interior water-communication between New Orleans and Southwest Louisiana.

July 1, 1882, amount available.....	\$5,040 84
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/>
	15,040 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$2,858 12
July 1, 1883, outstanding liabilities.....	794 21
	<hr/>
	3,652 33
July 1, 1883, amount available.....	<hr/>
	11,388 51

BAYOU TERREBONNE, LOUISIANA.

(Page 141.)

First appropriation, 1880. The improvement in progress is cutting overhanging trees for 20 miles below Houma, and dredging for about 5 miles, so as to obtain a depth of 4 feet at low water. This is a tidal bayou; this part of the stream serves for purposes of a highway, and is of great importance, being connected with many other bayous, dependent upon it for a route to market, roads on the bayou banks being useless for moving freight.

The commerce to be benefited includes the whole amount coming to Houma, which, in 1878-'79, was 14,175 hogsheads sugar, 20,840 barrels molasses, with much rice and other produce; but sugar plantations furnish the greater part of the freight.

July 1, 1882, amount available.....	\$1,577 19
Amount appropriated by act passed August 2, 1882	7,000 00
	<hr/>
	8,577 19
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$8,463 77
July 1, 1883, outstanding liabilities	20 00
	<hr/>
	8,483 77
July 1, 1883, amount available	<hr/>
	93 42

BAYOU COURTABLEAU, FROM PORT BARRE TO THE ATCHAFALAYA, LOUISIANA.

(Page 140.)

First appropriation, 1880. This stream, which forms a connection between the Teche and the Atchafalaya, is obstructed by a bar near its mouth that frequently cuts off all communication with this last stream. It is proposed to remove this bar by closing the principal running bayous and forcing all the water through the mouth, and also to clear the snags and impending trees from Port Barre down. The work is not quite completed. This is an important link in the water communications of the interior of the State. About three steamers a week pass along the stream each way throughout the year. The improvement is important, especially to the Teche country. The amount of commerce to be benefited has not been reported to this office, but is large.

July 1, 1882, amount available	\$6,085 15
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	3,191 59
	<hr/>
July 1, 1883, amount available	2,893 56

BAYOU LA FOURCHE, LOUISIANA.

(Page 141.)

First appropriation for survey 1852, for improvement 1878. The object of the improvement is to afford low-water navigation to the lower bayou by removal of all obstructions, such as snags, wrecks, and raft heaps, &c., with which the natural channel was obstructed from Donaldsonville down. The work has reached as far as 24 miles below Lockport.

The navigation of the La Fourche derives its importance principally from the sugar and rice plantations along its banks, the annual value of whose products is reported to be about \$2,000,000. These have to be carried by the bayou for market at New Orleans, either up to the Mississippi at Donaldsonville or down to the Texas and Louisiana Railroad at Riceland, or to several canals leading to the Mississippi.

The benefit to commerce is the increase of facilities for transportation.

July 1, 1882, amount available	\$4,663 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$3,926 90
July 1, 1883, outstanding liabilities	62 00
	<hr/>
	3,988 91
July 1, 1883, amount available	675 01

CALCASIEU RIVER, FROM PHILLIP'S BLUFF TO ITS MOUTH, LOUISIANA.

(Page 141.)

First appropriation, 1881. The object of the improvement is to obtain a channel of navigable width and depth from Phillip's Bluff to the mouth of the river in Lake Charles, 56 miles. The natural channel is much obstructed by snags, sunken logs, and overhanging trees.

The commerce to be benefited amounts to about 2,000 bales of cotton annually, which has now to be transported overland to a railroad, and lumber. There are seven saw-mills near the mouth of the river, producing about 2,800,000 feet per month, the greater part of which is shipped to Galveston.

July 1, 1882, amount available	\$2,991 39
Amount appropriated by act passed August 2, 1882	7,000 00
	<hr/>
	9,991 39
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	194 55
July 1, 1883, amount available	9,796 84

CALCASIEU PASS, LOUISIANA.

(Page 141.)

First appropriation, 1872. With this appropriation a cut was made across the bar at the foot of the lake, 6,300 feet long, 60 feet wide, and 6½ feet deep at mean low water.

When work was resumed with the appropriation of 1881 the cut was found to have filled to some degree. It has since been lengthened, widened to 70 feet, and deepened to 8 feet at mean low water. The work is not considered permanent, and the depth was made 8 feet to prolong its usefulness.

The amount of commerce benefited is that of the trade of the river, which is reported to have increased very much since the first improvement was made.

July 1, 1882, amount available	\$156 75
Amount appropriated by act passed August 2, 1882	3,000 00
	<hr/>
	3,156 75
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	156 75
July 1, 1883, amount available	3,000 00

RED RIVER, LOUISIANA, ARKANSAS, AND TEXAS.

(Page 258.)

Appropriations for the improvement of the navigation of this river were made at intervals between the years 1828 and 1841. There was then an interval of no appropriation between 1841 and 1852, and a longer interval of twenty years between 1852 and 1872, during which time the results of work previously done were lost.

The present improvement dates from 1872, and has been of great benefit to commerce. The river was almost incapable of navigation above Shreveport on account of the great raft. This has been removed and the river kept open by means of snag-boats constantly on watch to remove snags and accumulations which might give rise to another raft.

The river is now open from Fulton to its mouth.

July 1, 1882, amounts available:	
From appropriation for removing raft in Red River and closing Tone's Bayou, La.	\$24,420 17
From appropriation for removing obstructions from Red River, Louisiana	1,446 76
From appropriation for improving Upper Red River from Fulton, Ark., to head of raft	2,874 19
	<hr/>
	28,741 66
Amount appropriated by act passed August 2, 1882	75,000 00
	<hr/>
	103,741 66
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$48,642 23
July 1, 1883, outstanding liabilities	40,000 00
	<hr/>
	88,642 23
July 1, 1883, amount available	15,099 43

BAYOU BOEUF, LOUISIANA.

(Page 140.)

This improvement was begun in 1881, and has consisted in cutting down leaning trees along the banks and removing obstructions from the river. Navigation has been greatly improved thereby, and boats now run regularly, during high water, to Jefferson, Louisiana.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	4,743 99
	<hr/>
July 1, 1883, amount available	256 01

YAZOO RIVER, MISSISSIPPI.

(Page 171.)

First appropriation in 1873. The benefit to navigation by the improvement of this stream has been marked.

The stream was obstructed by a large number of wrecks, which have been removed, and navigation was limited by snags, leaning trees, and other obstacles common to all such streams. These having also been removed, the capacity of the river for navigation has been greatly increased.

July 1, 1882, amount available	\$306 31
Amount appropriated by act passed August 2, 1882	8,000 00
	<hr/>
	8,306 31
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	8,005 13
	<hr/>
July 1, 1883, amount available	301 18

BIG SUNFLOWER RIVER, MISSISSIPPI.

(Page 170.)

First appropriation, 1879. The depth of water over the shoals has been increased from 18 inches to 3½ feet, and in the lower portions snags and other obstructions have been removed from the stream, which has been freed from leaning timber from Clarksdale to its mouth.

The improvement to navigation and benefit to commerce have been marked.

July 1, 1882, amount available	\$1,354 62
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	6,354 62
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	4,340 54
	<hr/>
July 1, 1883, amount available	2,014 08

TALLAHATCHIE RIVER, MISSISSIPPI.

(Page 171.)

First appropriation, 1879. The capacity for navigation of this river before improvement, was very limited on account of obstructions, and has been increased so that boats which navigate the Upper Yazoo can also navigate the Tallahatchie as far as Batesville, the railroad crossing.

The benefit to commerce has been marked, as testified to by steamboat men on this river.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount expended during fiscal year	2,681 72
	<hr/>
July 1, 1883, amount available	318 28

COLDWATER RIVER, MISSISSIPPI.

(Page 170.)

The appropriations of 1879 and 1880 were applied to the removal of snags, logs, and leaning trees. This stream cannot be put in a navigable condition without an expenditure greater than the commerce of that region would warrant.

The improvement made has been of but little benefit to commerce.

July 1, 1882, amount available	\$1,339 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	345 10
July 1, 1883, amount available	993 91

TCHULA LAKE, MISSISSIPPI.

(Page 171.)

First appropriation, 1881. This stream, before improvement, was much obstructed by snags, logs, and overhanging trees. Its capacity for navigation has been so increased that light-draught boats can enter it earlier in the season. The benefit to commerce has been marked.

Amount appropriated by act passed August 2, 1882	\$2,500 00
July 1, 1883, amount expended during fiscal year	2,228 54
July 1, 1883, amount available	271 46

BIG HATCHIE RIVER, TENNESSEE.

(Page 206.)

First appropriation, 1880.

This stream was almost incapable of navigation before improvement. Since the work has been in progress a fair capacity for navigation has been kept up.

The improvement has resulted in benefit to commerce by allowing the shipment of products by the river, where, heretofore, a railroad had the monopoly.

It is as yet incomplete.

July 1, 1882, amount available	\$431 89
Amount appropriated by act passed August 2, 1882	3,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	3,431 89
July 1, 1883, amount available	3,170 63
July 1, 1883, amount available	261 26

YALLABUSHA RIVER, MISSISSIPPI.

(Page 171.)

Before the commencement of the work of improvement in 1881 the capacity of the river for navigation was limited. A large number of obstructions have been removed, and so increased the facilities of navigation that a steamboat is being built for use on the stream.

The benefit to commerce has been an increase of shipment of cotton from 3,500 to 12,000 bales, which it is expected will be further increased upon the completion of the improvement.

Amount appropriated by act passed August 2, 1882	\$3,500 00
July 1, 1883, amount expended during fiscal year	3,400 24
July 1, 1883, amount available	99 76

OUACHITA RIVER, ARKANSAS AND LOUISIANA.

(Page 257.)

Improvement begun with appropriation of 1871. The least depth of water at low water on some of the shoals in the river was 12 inches before improvement. The stream is now navigable, for boats drawing 3 feet, to Camden at low water. High-water navigation has also been greatly improved by clearing the banks of leaning trees and the channel of snags, drift, etc.

The benefit to commerce has been decided.

July 1, 1882, amount available	\$1,711 51
Amount appropriated by act passed August 2, 1882	12,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	13,711 51

TENSAS RIVER, LOUISIANA.

(Page 142.)

The small appropriation of 1881 is the only one made for this river. Commerce has been benefited to a limited extent by its expenditure, which was applied to removing leaning trees, logs, and snags from the stream.

BAYOU BARTHOLOMEW, LOUISIANA AND ARKANSAS.

(Page 225.)

Improvement begun with appropriation of 1881. The improvement has consisted in the removal of obstructions from the stream.

It is only susceptible of high-water navigation. This has been improved, and there are now no impediments in the part worked over.

The benefit to navigation has been marked.

July 1, 1882, amount available.....	\$582 26
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	5,582 26
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	3,976 81
	<hr/>
July 1, 1883, amount available	1,605 45

CYPRESS BAYOU, TEXAS AND LOUISIANA.

(Page 228.)

Improvement begun with appropriation of 1872. No appropriation since 1879, and no work done here since 1880. The capacity for navigation before improvement was very limited; it is now in good condition for high-water navigation.

Since the development of railroads in this vicinity the navigation of the bayou has been almost totally neglected.

July 1, 1882, amount available.....	\$2,584 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	845 78
	<hr/>
July 1, 1883, amount available.....	1,738 80

SOUTH FORKED DEER RIVER, TEXAS.

(Page —.)

The only appropriation for this improvement, that of August 2, 1882, has not been expended. The stream is navigated by flat-boats only, and is crossed by numerous bridges, which are complete obstructions.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount available.....	3,000 00

ARKANSAS RIVER AT PINE BLUFF, ARKANSAS.

(Page 224.)

First appropriation, 1880. The work here is with the view of protecting the river bank in front of the town from erosion; of preventing a threatened cut-off which would leave the town 3 or 4 miles from the river and seriously injure the river commerce at this point, and to rectify the channel in the vicinity for the general improvement of navigation.

The improvement, as far as it has progressed, has succeeded in its object.

July 1, 1882, amount available.....	\$1,809 01
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	21,809 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	19,755 18
	<hr/>
July 1, 1883, amount available.....	2,053 83

ARKANSAS RIVER AT FORT SMITH, ARKANSAS.

(Page 224.)

Allotment, 1876. First appropriation, 1878. The improvement here was the removal of a bar that made the landing difficult at low water, and that was also in the way of passing boats.

The work has accomplished the object for which it was designed, and has proved of benefit to the river commerce.

ARKANSAS RIVER BETWEEN FORT SMITH, ARKANSAS, AND WICHITA, KANSAS.

(Page 224.)

First appropriation, 1879. The work in progress consists in the removal of snags, rocks, and other obstructions to navigation. A large part of the products of the Indian Territory and of Western Kansas will seek this outlet upon the completion of the improvement. The commerce thus far benefited is that between Fort Smith, Arkansas, and Fort Gibson, Indian Territory.

July 1, 1882, amount available.....	\$8,622 84
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	28,622 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	7,051 83
	<hr/>
July 1, 1883, amount available.....	21,571 01

WHITE RIVER, MISSOURI AND ARKANSAS.

(Page 119.)

Allotment, 1870. First appropriation, 1871, for White, Black, and Little Red. The reach of the river covered by the improvements already made extends from its mouth to Summer's Shoal, a distance of about 500 miles. The work done consists of the removal of snags, logs, rock, and overhanging trees, and the concentration of water over the shoals by means of dams and dikes made of brush and gravel. Steamboats can now reach Summer's Shoal on a stage of water 3 feet less than before the work was done. The improvement benefits the country bordering on the river, which is almost wholly dependent on water transportation. Cotton is the staple product and is yearly increasing.

In 1879-'80, 15,000 bales were carried by river from Batesville to Newport, Arkansas.

White River between Jacksonport and Buffalo Shoals, Arkansas:

July 1, 1882, amount available	\$2,265 68
Amount appropriated by act passed August 2, 1882	6,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	8,265 68
July 1, 1882	2,146 80
	<hr/>
July 1, 1883, amount available	6,118 88

White River above Buffalo Shoals, Arkansas:

July 1, 1882, amount available	\$1,652 84
Amount appropriated by act passed August 2, 1882	4,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	5,652 84
July 1, 1882	120 00
	<hr/>
July 1, 1883, amount available	5,532 84

SAINT FRANCIS RIVER, ARKANSAS.

(Page 119.)

First appropriation, 1872. The river has been made navigable for steamboats at medium and high stages of the river as far up as Lester Landing, about 270 miles from its mouth, by the removal of snags, logs, and overhanging trees.

Commerce, cotton annually brought to market, about 35,000 bales, with corresponding return freight.

L'ANGUILLE RIVER, ARKANSAS.

(Page 119.)

First appropriation, 1878. The river has been cleared of snags, overhanging trees, and other obstructions as far as Marianna, 24 miles from its mouth. It has been of material benefit to the commerce of that place.

In 1879, 2,500 bales of cotton were brought down the river.

July 1, 1882, amount available	\$3,149 47
July 1, 1883, amount available	3,149 47

BLACK RIVER, ARKANSAS AND MISSOURI.

(Page 225.)

First appropriation, 1871, for White, Black, and Little Red rivers, Arkansas.

A large number of snags, trees, and other obstructions have been removed from the river and some brush and gravel dams built.

The river is now in a fair navigable condition, at low water, from Poplar Bluff, Missouri, to 30 miles below, and for a distance of 160 miles above Jacksonport, Arkansas.

Black River is a tributary of White River. From the Upper Black great quantities of staves are taken for export to foreign countries, and from the Lower Black from 10,000 to 20,000 bales of cotton are shipped to Memphis and other markets. Cotton shipments are expected to increase with the improvement of the river.

Black River, Arkansas and Missouri:

July 1, 1882, amount available	\$859 25
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	10,859 25
July 1, 1882	5,980 65
	<hr/>
July 1, 1883, amount available	4,878 60

Black River, Arkansas:

July 1, 1882, amount available	\$810 66
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	17 50
	<hr/>
July 1, 1883, amount available	793 16

CURRENT RIVER, MISSOURI AND ARKANSAS.

(Page 228.)

First appropriation, 1872. By the removal of snags, logs, and overhanging trees, and the construction of wing-dams made of brush and stone or gravel to concentrate the water over shoal places, the river has been made in good navigable condition for a distance of 23 miles from its mouth.

Shipments on the river are principally cotton and lumber.

FOURCHE LA FÈVE RIVER, ARKANSAS.

(Page 119.)

First appropriation, 1879. By the removal of obstructions this stream has been made navigable, during medium and high stages of water, from its mouth to Harrison's Shoal, a distance of about 60 miles.

Large quantities of lumber and cotton are brought down annually, besides grain, furs, tallow, and bees-wax. There are also mines of lead, iron, and other metals in the valley, which can be profitably worked.

July 1, 1882, amount available	\$101 85
Amount appropriated by act passed August 2, 1882	4,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	4,101 85

SALINE RIVER, ARKANSAS.

(Page 119.)

First appropriation, 1880. By the removal of obstructions this river has been made fairly navigable at medium and high water stages from its mouth up for a distance of about 240 miles.

The average produce shipped out of the river each year is about 10,000 bales of cotton, 50,000 staves, 200 bales of hides and sundries, besides other commodities.

July 1, 1882, amount available	\$2,474 32
Amount appropriated by act passed August 2, 1882	4,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	6,474 32
July 1, 1883, amount available	4,128 25
July 1, 1883, amount available	2,346 07

LITTLE MISSOURI RIVER, ARKANSAS.

(Page 119.)

Appropriations, 1871 and 1872. Nothing done since the end of fiscal year, June 30, 1873. The river was cleared of obstructions from its mouth to Rawle's Hills, a distance of 29½ miles. The necessity for further improvement ceased with the making of a railroad connection with points on the Ouachita River in 1874.

PIER IN THE MISSISSIPPI RIVER, NEAR SAINT LOUIS, MISSOURI.

(Page 236.)

The appropriations of 1836 and 1837 were applied to beginning a system of works, which, by the assistance of the city of Saint Louis, finally resulted in closing the chute east of Bloody Island, and confining the channel of the river to the Saint Louis shore, greatly to the benefit of the harbor.

The channel depth, in the portions of Saint Louis Harbor affected by this work, was increased from 5 feet, in 1837, to now about 12 feet at the lowest stage.

HARBOR AND MISSISSIPPI RIVER AT ALTON, ILLINOIS.

(Page 236.)

This improvement, made with allotments from the appropriations of 1872 and 1881 and 1882, has resulted in deepening the channel of the river for general navigation, and in preserving the harbor and extending the river front of Alton, and has been positively beneficial to the commerce of the Mississippi.

MISSISSIPPI RIVER, BETWEEN MISSOURI AND MARAMEC RIVERS.

(Page 235.)

The appropriation of 1872 and subsequent allotments were expended for the benefit of Saint Louis Harbor.

The work accomplished was principally that of protection, and has been of much value to the commerce of Saint Louis.

MISSISSIPPI RIVER, BETWEEN MISSOURI AND OHIO RIVERS.

(Page 235.)

The appropriation of 1873 was applied to the harbor of Saint Louis and at Horsetail Bar below. At Saint Louis, in continuation of the work begun, the results were beneficial to commerce. At Horsetail Bar the expenditures were productive of no useful result.

MISSISSIPPI RIVER, BETWEEN ILLINOIS AND OHIO RIVERS.

(Page 236.)

The appropriations under this head, from 1874 and subsequently, were applied at first at special points where the greatest obstructions to navigation existed, but are now devoted to the interest of the general navigation of the river.

The works are in progress and incomplete. They have stopped the caving of banks and consequent injury to navigation for a distance of 24 miles; have increased the channel depth to at least 8 feet from Saint Louis to 21 miles below, where formerly there were eight shoals having a depth of but $3\frac{1}{2}$ to 4 feet at the lowest stage, and have doubled the navigable capacity of the part of the river in which they are located, during the period of low water when navigation is obstructed.

July 1, 1882, amount available	\$112,145 18
Miscellaneous receipts	86 64
Amount appropriated by act passed August 2, 1882	600,000 00
	<hr/>
	712,231 82
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$510,995 09
July 1, 1883, outstanding liabilities	5,991 15
	<hr/>
	516,986 24
July 1, 1883, amount available	195,245 58

LIBERTY BAR, MISSISSIPPI RIVER.

(Page 236.)

The appropriation of 1875 and subsequent allotments were applied to the protection of a caving bank. It has prevented the destruction of certain land, but has not deepened the channel, and its benefit to commerce is insignificant.

DICKY'S ISLAND TO MOUTH OF OHIO.

(Page 236.)

The appropriations of 1876, 1878, and 1879 were applied to bank protection, to arrest the danger of a junction of the Mississippi and Ohio in rear of the town of Cairo.

Confidence of the people of Cairo was restored, and business interests of the place much benefited by the work.

KASKASKIA BEND.

(Page 236.)

The expenditures here were for the protection of a caving bank. The work was only partially successful in the protection of land, it has not increased the navigable capacity of the river, and has been of no benefit to commerce.

CAHOKIA CHUTE.

(Page 236.)

Appropriation of 1878 and additional allotments.

The work done here, in its present condition, has thrown the main steamboat channel into the chute west of Arsenal Island, much to the benefit of the Saint Louis landing; has stopped, to a large degree, the erosion of the Illinois shore; has deepened the channel from about $3\frac{1}{2}$ to about 10 feet at the lowest stage, and has been of great benefit to commerce, both local and general. The river and harbor act of August 2, 1882, provides that the unexpended sums heretofore appropriated for an ice-harbor at Saint Louis shall be expended for the improvement of the channel opposite the city by repairing and raising the present low dam at Cahokia Chute, and such other works as may be deemed advisable. This work is in progress.

July 1, 1882, amount available	\$60,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$32,900 54
July 1, 1883, outstanding liabilities	1,003 40
	<hr/>
	33,903 94
July 1, 1883, amount available	26,096 06

MISSISSIPPI RIVER AT OR NEAR CAPE GIRARDEAU.

(Page 237.)

The work done here has increased the width of deep water in front of the town from 200 to 1,200 feet; has increased the depth of approach from 2 to 15 feet, and the depth in the general steamboat channel from 4 to 8 feet at the lowest stage.

The benefit to commerce has been general as well as local.

OSAGE RIVER, KANSAS AND MISSOURI.

(Page 257.)

First appropriation, 1871. This improvement has resulted in deepening the channel of the river, for a distance of 60 miles from its mouth, from a depth of 6 inches, that existed over numerous shoals, to 2 feet at low water; and removing snags and overhanging trees for 176 miles from its mouth, and has been of much benefit to the commerce of the river, which for the fiscal year ending June 30, 1882, amounted to 9,028 tons carried by boats, valued at \$263,856, and lumber rafted valued at \$576,372.

July 1, 1882, amount available	\$11,488 51
Miscellaneous receipts	45 57
	<hr/> 11,534 08
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$9,823 56
July 1, 1883, outstanding liabilities	49 87
	<hr/> 9,873 43
July 1, 1883, amount available	1,660 65

REMOVAL OF OBSTRUCTIONS IN THE MISSISSIPPI, MISSOURI, AND ARKANSAS RIVERS.—SNAGGING.

(Page 249-250.)

Mississippi River.—Work begun with the appropriation of 1824. The improvement consists in the direct removal of dangerous obstructions to navigation. It cannot be considered as affecting the navigable capacity of the river, as that would seem to refer more to the possible draught of water available before and after improvement, but the ease and security afforded have been very great whenever the work has been kept up. During those periods when the work has been suspended or inadequately performed, owing to failure of appropriations or other causes, the resulting accumulations of snags have been of great injury to the commerce of the river.

July 1, 1882, amount available	\$3,812 18
Amount received from sales of fuel to officers	19 12
Amount appropriated by act passed August 2, 1882	85,000 00
	<hr/> 88,831 30
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	69,540 59
July 1, 1883, amount available	19,290 71

Missouri River.—The work was begun in 1832. The above remarks apply with greater force, as the accumulation of snags is relatively greater.

July 1, 1882, amount available	\$80,000 00
Amount appropriated by act passed August 2, 1882	65,000 00
	<hr/> 145,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	46,661 35
July 1, 1883, amount available	98,338 65

Arkansas River (page 250).—First appropriation, 1832.

Operations have extended, and obstructions removed, from the mouth of the Arkansas to the mouth of Grand River, in Indian Territory, a distance of about 550 miles, rendering the river navigable in this distance for ten months in the year, and at high water boats have ascended 300 miles further. The operations on these rivers must be continuous, and do not admit of permanent completion. They benefit the whole great inland commerce of the west.

July 1, 1882, amount available	\$4,356 41
Amount appropriated by act passed August 2, 1882	35,000 00
	<hr/> 39,356 41
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	21,213 28
July 1, 1883, amount available	18,143 13

IMPROVEMENT OF MISSOURI RIVER, BETWEEN SIOUX CITY AND THE MOUTH.

(Pages 251, 252, 253.)

The appropriations made since 1876 for special localities on the river have been expended for the benefit of isolated points, and, being generally small, it became necessary to resort to temporary devices and weak constructions, to the great detriment of economical work; and as no piece of work could be properly finished, or any plan thoroughly carried out, the works put in have frequently failed and required renewal, so that although the aggregate amount of money expended has been considerable, yet the results have, in several instances, been unsatisfactory. Experience has, however, fully demonstrated that the methods pursued are now no longer experimental.

The appropriation of 1882, being for the whole river, in one sum, inaugurates a thorough and systematic improvement, and makes continuity of work possible.

70 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

Work has been begun on that portion of the river lying between Charleston, Kans., and Lexington, Mo., a distance of 180 miles, and embraces within its limits five of the localities where work has heretofore been in progress, viz, Saint Joseph, Atchison, Fort Leavenworth, Kansas City, and Lexington.

It is proposed to complete the improvement of this portion as soon as possible, and then to extend the work to other portions as rapidly as funds will permit.

Amount received from sales of fuel to officers.....	\$97 86
Amount appropriated by act passed August 2, 1882.....	850,000 00
	<hr/>
	850,097 86
July 1, 1883, amount expended during fiscal year	\$606,970 59
July 1, 1883, outstanding liabilities.....	92,927 19
	<hr/>
	699,897 78
July 1, 1883, amount available	150,200 08

GASCONADE RIVER, MISSOURI.

(Page 172.)

First appropriation, 1880. This work has consisted entirely in the removal of snags, which in many places were so numerous as to render low-water navigation too hazardous to be attempted.

The removal of these local accumulations of obstructions has been of very marked benefit to navigation.

This improvement affords cheap and convenient transportation for the products of a large portion of Maries, Osage, and Gasconade counties, Missouri, and will make further development of the country profitable. Wheat and corn are grown in large quantities. Iron ore and oak and pine lumber plentiful.

July 1, 1882, amount available.....	\$534 31
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,534 31
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	10,025 69
	<hr/>
July 1, 1883, amount available	508 62

MISSOURI RIVER ABOVE MOUTH OF YELLOWSTONE.

(Page 251.)

Improvement begun in 1879. Before improvement, boats could only ascend, after August 1, as far as Cow Island, about 150 miles below Fort Benton.

The benefits resulting from improvement, so far, are extension of period of navigation above Cow Island, and greater number of boats and trips to Fort Benton, owing to increase of depth on some of the shoals, and improved channels on the rapids.

The river and harbor act of August 2, 1882, changed this appropriation to improvement of the Missouri from Sioux City to Fort Benton, and work has been done on the river at points between Fort Benton and Bismarek.

July 1, 1882, amount available	\$1,069 99
Amount appropriated by act passed August 2, 1882.....	100,000 00
	<hr/>
	101,069 99
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$37,919 72
July 1, 1883, outstanding liabilities	8,938 35
	<hr/>
	46,858 07
July 1, 1883, amount available.....	54,211 92

YELLOWSTONE RIVER.

(Page 262.)

In 1876, before improvement, the river was obstructed by Buffalo, Baker's, and Wolf's rapids, all serious impediments to navigation, besides by several shoals.

There is now no difficulty in passing these rapids, and the shoals between Miles City and Glendive have a least depth of 3 feet at low water, greatly facilitating the transportation of freight to the northern portions of Montana.

July 1, 1882, amount available.....	\$2,115 99
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	22,115 99
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$16,886 42
July 1, 1883, outstanding liabilities.....	399 94
	<hr/>
	17,286 36
July 1, 1883, amount available.....	4,829 63

IMPROVING UPPER MISSISSIPPI—OPERATIONS OF SNAG-BOATS.

(Page 232.)

Since 1867 four snag and dredge boats have been built and operated between Saint Paul and the mouth of the Missouri, a distance of 715 miles, in removing obstructions of all kinds, in assisting stranded boats, barges, and rafts, and dredging channels through shallow bars.

The work has been of very great benefit to the entire commerce and navigation of the Upper Mississippi.

July 1, 1882, amount available.....	\$1,374 94
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	26,374 94
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	16,187 08
	<hr/>
July 1, 1883, amount available.....	10,187 86

IMPROVING MISSISSIPPI RIVER FROM SAINT PAUL TO DES MOINES RAPIDS.

(Page 232.)

Since 1863, 515 miles of this portion of the river have been under improvement by the construction of works which confine and regulate the channel.

The work so far carried out has been very successful.

In some cases, by the removal of a single bar navigation has been opened up for 100 miles or more; and at numerous points an increased depth of from 20 inches at low water to 4 and 6 feet and over has been secured.

The whole commerce of the Upper Mississippi has been very materially benefited by the work already accomplished.

July 1, 1882, amount available.....	\$21,399 91
Amount appropriated by act passed August 2, 1882.....	250,000 00
	<hr/>
	271,399 91
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$167,066 61
July 1, 1883, outstanding liabilities.....	523 34
	<hr/>
	167,589 95
July 1, 1883, amount available.....	103,749 96

IMPROVING MISSISSIPPI RIVER FROM DES MOINES RAPIDS TO ILLINOIS RIVER.

(Page 235.)

On this stretch of river, 163 miles in length, work of improvement has been similarly conducted, as above, and has been productive of like results.

July 1, 1882, amount available.....	\$47,479 67
Amount appropriated by act passed August 2, 1882.....	200,000 00
	<hr/>
	247,479 67
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$97,073 84
July 1, 1883, outstanding liabilities.....	5,978 82
	<hr/>
	103,052 66
July 1, 1883, amount available.....	144,427 01

HARBORS OF REFUGE IN LAKE PEPIN.

(Page —.)

No expenditure of the appropriation of August 2, 1882, for this work has as yet been made, the amount appropriated being insufficient.

Amount appropriated by act of August 2, 1882.....	\$20,000 00
July 1, 1883, amount available.....	20,000 00

MISSISSIPPI RIVER FROM THE BRIDGE ABOVE LA CROSSE, WISCONSIN, TO MOUTH OF ROOT RIVER.

(Page 232.)

Four sand bars have been removed in a stretch of river of about 4 miles and the depth increased on them from about 30 inches to 5 and 6 feet and more, practically opening an unbroken stretch of 136 miles of excellent navigable water.

This work was for the benefit of through navigation, and has been of great importance to the entire commerce of the Upper Mississippi.

MISSISSIPPI RIVER AT GUTTENBURG, IOWA.

(Page 233.)

The removal of a bar in the raft channel opposite this place, a heavy shipping point, has been of great benefit to its commerce and to the entire lumber interest of the Upper Mississippi, by making, for about 14 miles, a safer and straighter channel for rafts.

July 1, 1882, amount available.....	\$2,527 28
July 1, 1883, amount expended during fiscal year.....	2,527 28

MISSISSIPPI RIVER OPPOSITE DUBUQUE, IOWA.

(Page 233.)

An immense sand-bar, in front of the town, in great part dry at low water, has been dredged to a depth of $4\frac{1}{2}$ feet.

The entire commerce of Dubuque, which is one of the largest cities in Iowa, and an important shipping point and coaling station, is benefited by this improvement.

July 1, 1882, amount available	\$10,755 10
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	380 78
July 1, 1883, amount available	10,374 32

ROCK ISLAND RAPIDS, MISSISSIPPI RIVER.

(Page 233.)

First appropriation in 1852. Work resumed in 1866. These rapids formed a succession of chains of rock extending entirely across the river and obstructing navigation for about 17 miles, with less than one foot depth in many places. There is now a channel of at least 200 feet in width and 4 feet in depth at low water. The entire commerce of the Upper Mississippi is immensely benefited by this improvement.

July 1, 1882, amount available	\$4,990 63
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	2,836 64
July 1, 1883, amount available	2,154 19

HARBOR AT ROCK ISLAND, ILLINOIS.

(Page 233.)

The appropriation of 1881 has been applied to dredging along the city front, which has been made easily accessible to steamers. More than one-half of the appropriation is unexpended and held in reserve for future emergencies.

Rock Island is an important manufacturing town of about 10,000 inhabitants.

July 1, 1882, amount available	\$6,669 62
July 1, 1883, amount available	6,669 62

MISSISSIPPI RIVER AT ANDALUSIA, ILLINOIS.

(Page 233.)

This is a town of 500 inhabitants, and of very little commercial importance. The object of the improvement was to make it accessible to steamboats at low stage. But little benefit has resulted from the expenditure of the small appropriation of 1881.

July 1, 1882, amount available	\$575 79
July 1, 1883, amount expended during fiscal year	575 79

HARBOR AT MUSCATINE, IOWA.

(Page 233.)

In 1879, before improvement, the entire city front was nearly inaccessible to steamboats at low stages from deposits of mud and sand. These have been removed and a current created which has so far prevented further accretions; the average depth has been increased from 2 to $5\frac{1}{2}$ feet.

This is an important manufacturing city and a large shipping point. The improvement has resulted in great benefit to its trade and commerce.

July 1, 1882, amount available	\$420 26
Amount appropriated by act passed August 2, 1882	2,500 00
July 1, 1883, amount available	2,920 26

RUSH CHUTE AND HARBOR OF BURLINGTON, IOWA.

(Page 234.)

First appropriation, 1875. The result of this improvement has been to increase the depth at the head of Rush Chute, and through it from about 30 inches to 6 feet at low water, and at the foot of the chute from 30 inches to 4 feet.

But a small expenditure has been made at the harbor of Burlington. It has been for dredging at the steamboat landings, which were obstructed by deposits of mud and sand.

Rush Chute is the main channel of the river, and the entire commerce of the Upper Mississippi has been benefited by its improvement.

HARBOR AT FORT MADISON, IOWA.

(Page 234.)

First appropriation, 1876. The projected improvement has not been fully carried out for want of funds. Before improvement the channel along the shore was 3 feet deep at low water and 50 feet wide. It is now 4 feet deep and from 150 to 300 feet wide.

This is an important manufacturing and shipping point of about 5,000 inhabitants.

July 1, 1882, amount available	\$2,274 25
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	2,274 25

ROCK RIVER RAPIDS AND DES MOINES RAPIDS IN THE MISSISSIPPI RIVER.

(Page 234.)

Appropriation of \$100,000 made in 1852. This was applied to removing rocks and bowlders from the Des Moines Rapids, and afforded partial relief to navigation. Further appropriation made in 1856.

DES MOINES RAPIDS CANAL.

(Page 234.)

The construction of the canal was begun in 1867. The Des Moines Rapids, 11 miles in length, consists of a succession of chains of rock which practically interrupted navigation for several months in the year, necessitating expensive transfers or an entire abandonment of traffic.

There is now a canal around 8 miles of the rapids and an excavated channel through the rocky chains for the remaining 3 miles. Before improvement less than 1 foot was found at several points at low water. There is now a slackwater navigation affording 5 feet at low water, and a channel of the same depth and 200 feet wide over the remaining 3 miles.

This improvement is of the greatest importance to the entire commerce of the Upper Mississippi.

July 1, 1882, amount available	\$30,247 17
Amount appropriated by act passed August 2, 1882	30,000 00
	60,247 17
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	37,136 44
July 1, 1883, amount available	23,110 73

OPERATING AND CARE OF DES MOINES RAPIDS CANAL.

The standing estimate for operating and care, including ordinary repairs, is \$40,000 per annum. The future expenses of the canal are provided for in the act of March 3, 1881, which authorizes the Secretary of War to draw from the Treasury from time to time such amounts as may be needed.

MISSISSIPPI RIVER AT AND ABOVE ALEXANDRIA, MISSOURI.

(Page 235.)

First appropriation, 1880. This improvement has resulted in the removal of a bar just below the mouth of Des Moines River and increasing the depth from 30 inches to 6 feet at extreme low water.

This benefits the entire commerce of the Upper Mississippi.

July 1, 1882, amount available	\$210 06
July 1, 1883, amount expended during fiscal year	210 06

IMPROVEMENT OF MISSISSIPPI RIVER AT QUINCY, ILLINOIS.

(Page 235.)

First appropriation, 1879. The work accomplished here is the removal of a bad bar obstructing navigation directly in front of Quincy. The depth on the bar has been increased from 3 to 6 feet, and benefits the entire commerce of the Upper Mississippi River.

July 1, 1882, amount available	\$12,526 22
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	35 00
July 1, 1883, amount available	12,491 22

QUINCY BAY, MISSISSIPPI RIVER, ILLINOIS.

(Page 235.)

Selected as a favorable site for an ice or winter harbor for steamboats, &c. The depth of the bay has been increased over a very large area from an average of 2 feet to 4½ feet, but a comparatively small part of the work has been completed.

The work is of great importance to all craft seeking refuge in winter and for repairs, especially to those navigating between Saint Louis and Keokuk, and also a safe place for the storage of rafts of lumber in winter.

Amount appropriated by act passed August 2, 1882	\$15,000 00
July 1, 1883, amount expended during fiscal year	14,797 89
July 1, 1883, amount available	202 11

MISSISSIPPI RIVER AT HANNIBAL, MISSOURI.

(Page 235.)

First appropriation, 1880. Before improvement there was but one available steamboat landing, almost impossible at low water. Nearly one-half mile of shore is now opened to the landing of boats, &c.

Hannibal is a very important business point, and its trade is very large.

MISSISSIPPI RIVER AT LOUISIANA, MISSOURI.

(Page 235.)

First appropriation, 1881. The improvement has been the construction of a dike which diverts the current to the Louisiana shore and prevents the threatened formation of bars in the main channel in front of the town. The projected improvement is only partially finished.

The work is of importance to the entire commerce of the Upper Mississippi.

GALENA RIVER AND HARBOR, ILLINOIS.

(Page 137.)

First appropriation, 1878. The work thus far accomplished has been dredging a cut from 80 to 100 feet wide from the mouth of the river to Galena, which has increased the channel depth from 20 inches to 6 feet. The work is only of temporary benefit. Owing to the nature of the material composing the bed of the stream, the channels made are soon greatly reduced in depth or entirely obliterated.

The trade of Galena has greatly diminished of late years, owing to railroad developments, and from the extensive cultivation of land adjoining the stream and washings from mines, the river has gradually so filled with deposits that at low or even medium stages but little water can be found in the channel.

CUIVRE RIVER, MISSOURI.

(Page 171.)

First appropriation, 1880. The navigation of the river from the mouth to "Chain of Rocks," about 16 miles, has been improved by an increase of about 4 feet in the depth. The approach to the river is still obstructed, the improvement being incomplete.

This work is of but little importance to commerce.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	5,000 00

ICE-HARBOR AT DUBUQUE, IOWA.

(Page —.)

First appropriation, 1882. The project adopted for a winter harbor at this place will create a basin having an area of about 500,000 square feet and a depth of 6 feet at extreme low water. This will create ample accommodation for all the steamboats, barges, and rafts at present likely to use it. The work is now in progress.

Amount appropriated by act passed August 2, 1882	\$20,000 00
July 1, 1883, amount expended during fiscal year	\$11,051 62
July 1, 1883, outstanding liabilities	1,107 70
	<hr/> 12,159 32
July 1, 1893, amount available	7,840 68

DRY-DOCK AT DES MOINES RAPIDS CANAL.

(Page —.)

First appropriation, 1882. The project for this work provides for a dock near the middle lock of the canal, 400 feet long by 100 feet in width, with gates of 80 feet opening.

The work is now in progress and is intended for the benefit of commerce by affording facilities for the repair of boats and barges engaged in the trade of the river, as well as those belonging to the Government and in use in the prosecution of its improvement.

Amount appropriated by act passed August 2, 1882	\$30,000 00
July 1, 1883, amount expended during fiscal year	5,392 95
July 1, 1883, amount available	24,607 05

FALLS OF SAINT ANTHONY, MINNESOTA.

(Page 231.)

The original object of the preservation of the Falls was to arrest the threatened destruction of the navigation of the river above. The work was commenced with the appropriation of 1870, but since 1878, owing to the construction of railroads, there has been no commerce on the river from the Falls to Saint Cloud, 77 miles above; and the expenditures here have proved to be no longer of importance to commerce.

The use of this part of the river is now confined to the running of loose logs.

July 1, 1882, amount available.....	\$11,428 15
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/> 36,428 15
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$34,653 57
July 1, 1883, outstanding liabilities.....	313 36
	<hr/> 34,966 93
July 1, 1883, amount available.....	1,461 22

LOCK AND DAM ON MISSISSIPPI RIVER AT MEEKER'S ISLAND.

(Page 231.)

The object of this is to extend navigation from Saint Paul to the Falls of Saint Anthony.

The appropriation of March 3, 1873, being contingent upon the relinquishment of a grant of land for the work made in 1868 by the United States to the State of Minnesota, which the State has, so far, failed to make, the work has not been commenced.

July 1, 1882, amount available.....	\$25,000 00
July 1, 1883, amount available.....	25,000 00

MISSISSIPPI RIVER ABOVE THE FALLS OF SAINT ANTHONY.

(Page 231.)

The first appropriation was made in 1874, at which time there was about 1½ feet on the worst shoals at low water. On the improved shoals there is now a least depth of 3 feet at low water.

There is now no appreciable amount of commerce between Saint Cloud and the Falls to be benefited by this improvement. Between Grand Rapids and Aitken, on the Northern Pacific Railroad, navigation has been benefited sufficiently to admit of steamboat navigation at mean low water.

In 1882 the amount of commerce between these points was: in twenty-seven trips, by two steamboats; freight carried, 2,026,000 pounds; passengers, 1,764.

July 1, 1882, amount available.....	\$3,359 27
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/> 13,359 27
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities, July 1, 1882.....	\$6,613 15
July 1, 1883, outstanding liabilities.....	714 32
	<hr/> 7,327 47
July 1, 1883, amount available, viz: improvement between Grand Rapids and Conradis Shoals.....	6,031 80

MINNESOTA RIVER, MINNESOTA AND DAKOTA.

(Page 169.)

In 1867, at the time of the first appropriation, this river was much obstructed by snags, leaning trees, bowlders, &c. A large number of these obstructions have been removed as far up the river as Yellow Medicine, so as to admit the passage of light-draught steamers. From the nature of the banks obstructions by snags and leaning trees are liable to be created anew after every flood.

But little benefit to commerce has resulted from the work done on this river, its navigation having nearly ceased since the building of the Saint Paul and Sioux City Railroad, in 1871.

July 1, 1882, amount available.....	\$33 00
July 1, 1883, amount available.....	33 00

SAINT CROIX RIVER, BELOW TAYLOR'S FALLS, MINNESOTA AND WISCONSIN.

(Page 259.)

In 1878, before the work of improvement was begun, the depth at low water, upon the worst shoals, was 12 inches, and generally in the river from 1½ to 2 feet. The available depth is now from 3½ to 4 feet.

The work done, thus far, has been of the greatest benefit to the commerce of the river.

In 1881, there were on the river two steamboats for freight and passengers; thirty-five steamboats engaged in towing; freight carried, 33,823,802 pounds; passengers, 11,000; logs passed through Saint Croix Boom, value, \$2,563,000; logs and lumber rafted, 185,000,000 feet.

The Mississippi River steamers from Saint Louis now ascend the Saint Croix to Stillwater.

July 1, 1882, amount available.....	23 57
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/> 30,023 57
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$16,150 80
July 1, 1883, outstanding liabilities.....	1,198 10
	<hr/> 17,348 90
July 1, 1883, amount available.....	12,674 67

CHIPPEWA RIVER, WISCONSIN.

(Page 217.)

In 1876, before improvement, the depth in the river at low water, upon the worst shoals, was 12 inches; there is now a navigable channel of from 3½ to 4 feet. The bar at the mouth of the river is open to rafts of the largest dimensions, where formerly those drawing from 12 to 16 inches found difficulty in passing. The work of improvement has been, thus far, confined to the portions of the river below the entrance to Beef Slough. It is proposed to continue the improvement to Eau Claire.

In 1881, three steamboats plied on the river. Freight carried, 1,966 tons; passengers carried, 16,989; value of logs and lumber run, \$7,272,513.

July 1, 1882, amount available	\$505 23
Amount appropriated by act passed August 2, 1882	35,000 00
	<hr/>
	35,505 23
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$26,736 59
July 1, 1883, outstanding liabilities	2,245 51
	<hr/>
	28,982 10
July 1, 1883, amount available	6,523 13

CHIPPEWA RIVER AT YELLOW BANKS.

(Page 217.)

First appropriation, 1882. The same benefit to commerce is expected as from the improvement of the channel of Chippewa River, of which this will form an important part by arresting the flow of sand into the channel.

The work is now in progress.

Amount appropriated by act passed August 2, 1882	\$30,000 00
July 1, 1883, amount expended during fiscal year	\$4,054 64
July 1, 1883, outstanding liabilities	9,066 06
	<hr/>
	13,120 70
July 1, 1883, amount available	16,879 30

RED RIVER OF THE NORTH, MINNESOTA AND DAKOTA.

(Page 257.)

The improvement of the river commenced with appropriation of 1876. The result of work to date is a fair high-water channel from Abercrombie to Fargo, 76 miles, and a permanently improved channel from Fargo to 75 miles below it; and 18 miles of river improved below Grand Forks. Further improvement is in progress.

In 1882, four steamboats and twenty barges of 200 tons capacity were engaged in the carrying trade. Wheat, merchandise, and lumber carried, 56,814,000 pounds. The shipments of grain to Fargo and Moorhead by the river are stated to be thirty times greater than before improvement.

July 1, 1882, amount available	\$12,137 55
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	22,137 55
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	17,633 53
	<hr/>
July 1, 1883, amount available	4,504 02

LOCK AND DAM AT GOOSE RAPIDS, RED RIVER OF THE NORTH.

(Page 257.)

The object of this work is to overcome the current and shoals of the rapids, so as to connect the improvements already made and to be made upon the channels of the river above and below. The work has not yet been begun; \$50,000 are now available for it. The estimate for completion is \$150,000.

These rapids, with a fall of 12 to 14 feet, stand as a dividing wall between the two halves of this important grain-carrying stream, and the proposed improvement is an absolute necessity to its rapidly increasing commerce.

July 1, 1882, amount available	\$20,000 00
Amount appropriated by act passed August 2, 1882	30,000 00
	<hr/>
	50,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	595 24
	<hr/>
July 1, 1883, amount available	49,404 76

RESERVOIRS AT THE SOURCES OF THE MISSISSIPPI AND ITS TRIBUTARIES.

(Page 230.)

This work has so far been limited to the headwaters of the Mississippi proper and to the commencement of a dam at Lake Winebigoshish and one at Leech Lake.

The reservoir system of the Upper Mississippi, above Saint Paul, contemplates the construction of seven reservoirs for the purpose of storing the surplus water of spring and early summer, to be released during seasons of drought and low water.

When completed they are expected to prove of benefit to the navigation of the Mississippi as far down as Lake Pepin, by increasing the flow of water when the river is at a low stage.

July 1, 1882, amount available	\$140,713 05
Amount appropriated by act passed August 2, 1882.....	300,000 00
	<hr/> 440,713 05
July 1, 1883, amount expended during fiscal year, exclusive of outstand- ing liabilities July 1, 1882	\$114,082 76
July 1, 1883, outstanding liabilities	14,511 62
	<hr/> 128,594 38
July 1, 1883, amount available.....	312,118 67

TENNESSEE RIVER.

(Page 260.)

Above Chattanooga.—First appropriation, 1852, with which some channel work was done. Next appropriation, 1870. The river was originally obstructed by rock reefs, gravel bars, shoals, &c., with about 15 inches water over them. There are now from 2 to 3 feet at low water as far as Knoxville, and the work is not completed. The advantage to commerce is a straightened channel, with obstructions removed and banks riprapped where necessary.

July 1, 1882, amount available	\$37 70
Amount appropriated by act passed August 2, 1882	7,000 00
	<hr/> 7,037 70
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$6,690 98
July 1, 1883, outstanding liabilities	59 67
	<hr/> 6,750 65
July 1, 1883, amount available	287 05

Below Chattanooga.—The State of Alabama began the construction of a canal around Big Muscle Shoals in 1831. In 1836 the canal was opened, the work having been done with proceeds of public lands donated by Congress. The present improvement was begun with an allotment from the appropriation of 1868, at which time the canal was in a dilapidated condition, and had been for several years unused. The original condition of the river was, to Brown's Ferry (160 miles), about 3 feet water for nine months of the year; thence to Florence (Muscle Shoals obstructions), 38 miles, not navigable. From Florence to mouth of the river 10 to 20 inches over numerous shoals with navigable pools between them.

The present condition of the river is as follows: From Chattanooga to Brown's Ferry rock reefs reduced, snags and bowlders removed, projected work incomplete. From Brown's Ferry to Florence, two locks of canal at Elk River Shoals well advanced; at Muscle Shoals, seven locks and masonry aqueduct finished, remaining two locks to be finished during the present summer of 1883. Lock gates in preparation at Little Muscle Shoals. A 3-foot channel is now navigable from the shoals to Florence. From Florence to mouth of the river, the river has been cleared and a few additional inches of depth secured at Colbert Shoals and other points.

The benefit to commerce is the securing of a safe through navigation, with increased depth of water at many points. The work done is of a permanent nature, but not entirely completed.

July 1, 1882, amount available.....	\$8,852 16
Amount appropriated by act passed August 2, 1882.....	250,000 00
	<hr/> 258,852 16
July 1, 1883, amount expended during fiscal year, exclusive of outstand- ing liabilities July 1, 1882.....	\$225,198 07
July 1, 1883, outstanding liabilities.....	10,004 09
	<hr/> 235,202 16
July 1, 1883, amount available	23,650 00

FRENCH BROAD RIVER, TENNESSEE.

(Page 230.)

First appropriation, 1876. Work was done upon the river by the State some forty years ago, but was not of permanent advantage. In its original condition the stream had from a few inches to 2 feet over numerous shoals at low water.

The depth has been increased at the most serious obstructions, and is now from 6 inches to 2 feet. The improvement is still incomplete.

The benefit to commerce is a channel well cleared of surface obstructions. Thirteen shoals improved. The increased depth and safe navigation has greatly increased freightage and rafting. The improvements are mostly of a permanent character.

July 1, 1882, amount available	\$1,464 59
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	6,464 59
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$6,436 72
July 1, 1883, outstanding liabilities	27 87
	<hr/>
	6,464 59

CLINCH RIVER, TENNESSEE.

(Page 206.)

First appropriation, 1880. The stream was very shallow, with only a few inches of water at shoals, and no low-water navigation. The rock reefs have been reduced and the channel, cleared of snag, overhanging trees, &c., is now passable at a stage of water varying from 2 to 4 feet lower than before improvement. The work is of a permanent nature. Benefit to commerce is the lengthening of season of safe navigation, with increasing freightage by flat-boats principally, numerous rafts passing safely. The work is incomplete.

July 1, 1882, amount available	\$5,502 00
Amount appropriated by act August 2, 1882	3,000 00
	<hr/>
	8,502 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$7,369 24
July 1, 1883, outstanding liabilities	597 66
	<hr/>
	7,966 90
July 1, 1883, amount available	535 10

HIWASSEE RIVER, TENNESSEE.

(Page 207.)

First appropriation, 1876. The work done by the State some fifty years ago gave but little permanent benefit to navigation. Before improvement, navigation was obstructed by reefs, rocky projecting points, and gravel bars, &c., with only 6 to 8 inches at low water. There is now a cleared channel of 22 to 36 inches at low water. The benefit to commerce is the securing safe navigation with increased depth, which has much increased the freightage of cotton and cereals. The improvement made is practically permanent.

July 1, 1882, amount available	\$31 98
Amount appropriated by act passed August 2, 1882	1,500 00
	<hr/>
	1,531 98
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$1,382 71
July 1, 1883, outstanding liabilities	17 74
	<hr/>
	1,400 45
July 1, 1883, amount available	131 53

DUCK RIVER, TENNESSEE.

(Page 207.)

First appropriation, 1880. Before improvement there was only about 1 foot water over numerous gravel bars, both snags, bowlders, and overhanging trees, greatly obstructing the channel. The improvement, which is essentially completed, is a navigable channel of about 2 feet from Centreville to the mouth of the river, 67 miles. Raftsmen report the new channel a success, their business being very materially increased and accidents reduced.

July 1, 1882, amount available	\$1,776 25
Amount appropriated by act passed August 2, 1882	3,000 00
	<hr/>
	4,776 25
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$4,543 08
July 1, 1883, outstanding liabilities	113 55
	<hr/>
	4,656 63
July 1, 1883, amount available	119 62

CUMBERLAND RIVER.

(Page 227.)

a. Below Nashville.—The greater part of the appropriations made between 1832 and 1839 was expended below Nashville in the construction of wing-dams, dikes, and jetties at nine different points, and in the removal of snags, rocks, and overhanging trees. Some dams were also built by the State of Kentucky. Work was resumed with the appropriation of 1871. Before improvement there was an average depth at shoals of about 14 inches at low water. The work done has

resulted in a lengthened season of safe navigation for steamers drawing from 3½ to 4 feet, making more trips with less difficulty and in less time than before improvement, and making it practicable to run light-draught boats during the low-water season.

b. Above Nashville.—Part of the appropriations made between 1832 and 1839 was expended in removing rocks, logs, snags, &c., from the bed of the river, and cutting trees standing on its banks and overhanging its channels.

The work of improvement was resumed with the appropriation of 1876, and has resulted in a cleared channel, having an increased depth of from 6 to 8 inches at the principal obstructions, by which the season of navigation is lengthened. Larger boats are now making regular trips to Point Burnside than were used before the improvement. The work is not completed.

c. At Smith's Shoals, Kentucky, four rapids formed a positive barrier to up-stream and a serious obstruction to down-stream navigation. The channel has been narrowed and deepened by means of wing-dams and a rock excavation, facilitating the safe passage of rafts and coal-boats. The improvement is practically complete and permanent.

The channel between Smith's Shoals and the falls of the Cumberland has been benefited by the removal of some immense bowlders and many snags, thus assisting the safe passage of boats, &c., running out of the Rock Castle and Laurel rivers.

d. Above the mouth of Jellico River.—The channel has been improved by removing snags, bowlders, &c.; but this was limited to the sections of the river between mill-dams (nine in number), which formed the principal obstructions.

Cumberland River.

a. Below Nashville:

Amount appropriated by act passed August 2, 1882.....	\$15,000 00
July 1, 1883, amount expended during fiscal year.....	\$9,545 99
July 1, 1883, outstanding liabilities.....	185 75
	<hr/> 9,731 74
July 1, 1883, amount available.....	<hr/> 5,268 26

b. Above Nashville:

July 1, 1882, amount available.....	\$3,392 23
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/> 33,392 23
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$27,806 67
July 1, 1883, outstanding liabilities.....	3,197 33
	<hr/> 31,004 00
July 1, 1883, amount available.....	<hr/> 2,388 23

c. Smith's Shoals (8 miles long):

July 1, 1882, amount available.....	\$254 63
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/> 15,254 63
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$14,475 83
July 1, 1883, outstanding liabilities.....	7 30
	<hr/> 14,483 13
July 1, 1883, amount available.....	<hr/> 771 50

d. Above the mouth of Jellico (110 miles):

July 1, 1882, amount available.....	\$1,063 89
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/> 6,063 89
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$216 67
July 1, 1883, outstanding liabilities.....	119 66
	<hr/> 336 33
July 1, 1883, amount available.....	<hr/> 5,727 56

CANEY FORK RIVER, TENNESSEE.

(Page 206.)

First appropriation, 1880. Before improvement there was about 3 feet 5 inches at the numerous shoals at a 3-foot stage of water, and many snags, gravel bars, and overhanging trees. There is now an additional depth of about 7 inches, and snags, loose rock, and overhanging trees have been removed. The work is not completed. The benefit to commerce is a safe channel from Sligo, the head of navigation, to the mouth of the river; with increased freight steamboats of 250 tons can now reach Sligo at a 3-foot stage.

Amount appropriated by act passed August 2, 1882.....	\$4,000 00
July 1, 1883, outstanding liabilities.....	966 07
July 1 1883 amount available.....	<hr/> 3,033 93

OBEY'S RIVER, TENNESSEE.

(Page 207.)

First appropriation, 1880. The channel was obstructed by gravel reefs, loose rock, snags, logs, and overhanging trees, with about 3 feet 6 inches water on shoals at a 3-foot stage. It has been cleared and the gravel bars and reefs have been reduced with a gain of about 6 inches of depth at the principal shoals, which now makes a safe channel for rafts and flat-boats and gives satisfaction to raftsmen.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	\$4 20
July 1, 1883, outstanding liabilities	1,338 45
	<hr/> 1,342 65
July 1, 1883, amount available	3,657 35

RED RIVER, TENNESSEE.

(Page 207.)

First appropriation, 1881. From the mouth to Port Royal, about 38 miles, the river was obstructed by gravel reefs, snags, and overhanging trees, and by two turnpike and one railroad bridge. The depth of water was about 10 inches at the shoals. By the work done there has been a gain of 4 inches of water and the channel has been cleared of surface obstructions. This secures a safe passage to rafts and flat-boats, but the improvement does not appear to have been utilized

July 1, 1882, amount available	\$43 57
July 1, 1883, amount available	43 57

COOSA RIVER, GEORGIA AND ALABAMA.

(Page 226.)

In 1823 action was taken by the State of Alabama to improve the navigation of the Coosa, and the act of Congress of May 23, 1828, appropriated certain surplus of grants of land for the same object. Not much work was done, if any, under either. The present improvement was begun with the appropriation of 1876, at which time the river was navigable for boats drawing 2½ feet, from Rome, Ga., to Greenport, Ala., 164 miles, excepting at very low water, when there was but 14 to 18 inches at several shoals. At Greenport five formidable reefs, and also at other points, obstructed navigation. By the improvement, as far as it has progressed, reefs have been reduced, bars, &c., removed, and the channel widened where required; a new, straight, wider and deeper channel made through the Greenport Reefs. Work on the Upper Coosa has resulted in a gain of about 8 inches of water. Two masonry locks are finished, and the stone for the third quarried and cut at the canal projected around the Ten Island Shoal obstruction.

The benefit to commerce is a safe, navigable channel from Rome to Greenport throughout the year for boats drawing 2½ feet at extreme low water. Good progress toward opening the canal and an improved channel to the Alabama coal-fields.

July 1, 1882, amount available	\$17,857 21
Amount appropriated by act passed August 2, 1882	83,700 00
	<hr/> 101,557 21
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$49,698 44
July 1, 1883, outstanding liabilities	3,841 77
	<hr/> 53,540 21
July 1, 1883, amount available	48,017 00

OOSTENAULA RIVER, GEORGIA.

(Page 134.)

First appropriation, 1874. The channel was greatly obstructed by gravel bars, ledges, loose rock, trees, &c., with a varying depth at low water of 15 inches to 3 feet. The channel obstructions have been removed, and wing-dams built to contract and deepen the channel, resulting in a safe navigable channel of 3 feet depth, for nine months in the year, below Calhoun, Ga. There appears to be no commercial necessity for any further expenditure.

COOSAWATTEE RIVER GEORGIA.

(Page 134.)

First appropriation, 1875. Before the improvement there were surface obstructions and numerous shoals, with the water varying from a few inches to 3 feet during the low-water season. A good channel has been secured having 2 feet of water during nine months of the year. The work contemplated has been completed, and there appears to be no commercial necessity for any further expenditure.

July 1, 1882, amount available	\$141 86
Amount appropriated by act passed August 2, 1882	1,000 00
July 1, 1883, amount available	1,141 86

ETOWAH RIVER, GEORGIA.

(Page 133.)

But one appropriation has been made for this stream, that of August 14, 1876. No work has been done except that pertaining to a survey. Nothing can be done without recourse to locks and dams at a cost of over \$2,000,000, without any corresponding advantages. Congress, by act of August 2, 1882, transferred \$8,700 of the unexpended funds to the Coosa River improvement.

OCMULGEE RIVER, GEORGIA.

(Page 133.)

This stream with the Oconee forms the Altamaha, and the three were formerly the only avenues of commerce for Central Georgia, and now furnish a natural outlet for the lumber, cotton, and other products of that region. Many years ago the State made several appropriations for its improvement, amounting to at least \$60,000. An examination of the river was authorized by Congress in 1852. The present improvement was begun with the appropriation of 1876, at which time the river was so filled, at points, with snags and sunken logs as to appear as immense rafts, with numerous sand-bars, surface obstructions, &c., and a varying depth of 22 inches to 4 feet at low water. The snags have been removed, the river cleared, and several abrupt bends straightened. Work is still in progress and has thus far resulted in a clear channel, with not less than 3½ feet at low water between Hawkinsville and the mouth of the river, by which the navigation by steamboats and rafts has been much benefited. The nature of the work is such that a small force will be required from time to time to remove obstructions that may develop in the future.

July 1, 1882, amount available	\$200 51
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/> 5,200 51
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$4,037 84
July 1, 1883, outstanding liabilities.....	3 48
	<hr/> 4,041 32
July 1, 1883, amount available	1,159 19

OCONEE RIVER, GEORGIA.

(Page 134.)

The State of Georgia appropriated during the first quarter of this century over \$35,000 for this river. The present improvement was begun with the appropriation of 1878. The river was obstructed by abrupt bends, snags, &c., and rocky ledges and reefs, with from 18 inches to 2½ feet at low water at the shoalest places.

There is now an improved channel from Dublin to the mouth of the river, with an increased depth of water of nearly 3 feet at low water. The work is not completed. An annual expenditure will be necessary to keep the channel clear, on account of the river changing its bed at many points.

July 1, 1882, amount available	\$37 85
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/> 5,037 85
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$2,088 31
July 1, 1883, outstanding liabilities	720 73
	<hr/> 2,809 04
July 1, 1883, amount available	2,228 81

LITTLE TENNESSEE RIVER, TENNESSEE.

(Page —.)

The first appropriation, 1882. The obstructions are snags, bowlders, reefs, &c. The plan adopted is to remove these obstructions and obtain a channel 40 feet wide and 2 feet deep from the mouth to Tellico River, a distance of 13 miles. The work was begun in March, 1883.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$1,712 95
July 1, 1883, outstanding liabilities	487 59
	<hr/> 2,200 54
July 1, 1883, amount available	2,799 46

SOUTH FORK, CUMBERLAND RIVER, KENTUCKY.

(Page —.)

First appropriation, 1882. The river is obstructed by reefs, loose rock, gravel bars, &c. Work was begun in March, 1883, having in view an improved channel affording safe navigation when the stream is not less than 3 feet above low water.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount expended during fiscal year	\$1,636 32
July 1, 1883, outstanding liabilities.....	60 00
	<hr/> 1,696 32
July 1, 1883, amounts available	1,303 68

OHIO RIVER.

(Page 225.)

The navigation of the Ohio has been greatly improved; but there being no fixed low-water line, its navigable capacity, before and after improvement, cannot be stated.

The depths in the river being dependent upon rainfall, there will always be, in years of little rain, little or no navigation, as in 1881, for instance, no matter how thoroughly the river may have been improved.

IMPROVEMENT OF THE FALLS OF THE OHIO RIVER.

(Page 254.)

Previous to February 26, 1872, when the improvement of the Falls of the Ohio River first became of any practical benefit to commerce, the natural channel-way at this point was by means of three chutes over the falls. The main chute (Indiana Chute) was navigable for descending boats from three to five months, and for ascending boats about one or one and one-half months in the year.

A canal, built by private parties, around the falls on the Kentucky side, called the Louisville and Portland Canal, which was open to commerce in 1830, permitted the passage of vessels not exceeding 185 feet in length, and 50 feet in breadth, and was therefore only available for the smaller class of vessels which were then navigating the rivers of the Mississippi Basin.

The project for this improvement was adopted in 1868, and its object was to deepen, widen, and enlarge the Louisville and Portland Canal, to complete the new locks and branch leading to them (which work had been begun in 1860 by the Louisville and Portland Canal Company, and stopped for want of funds in 1866). Since then the project has been extended, by the action of Congress, so as to include the improvement of the Indiana Chute.

Ever since February 26, 1872, the improvements made here have permitted the passage of boats through the canal, not exceeding 335 feet in length and 80 feet in width.

During the year ending June 30, 1882, \$34,118.60 have been expended upon Indiana Chute. The advantage in this has been to bring the natural main navigable channel over the falls into a better condition. All the work done in this direction will relieve the artificial channel, or Louisville and Portland Canal, in periods when commerce is crowded at that point.

During the fiscal year ending June 30, 1882, the falls were navigable for ascending and descending boats one hundred and fifteen days, and for descending boats only, one hundred and twenty-seven days; 2,543 vessels, with a registered under-tonnage of 758,871 tons, passed over them. These carried, in addition to general merchandise, 18,545,000 bushels of coal and 18,600 tons of iron ore.

July 1, 1882, amount available	\$158,575 44
Amount appropriated by act passed August 2, 1882	350,000 00
	<hr/> 508,575 44
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882,	\$362,913 69
July 1, 1883, outstanding liabilities	34,448 38
	<hr/> 397,362 07
July 1, 1883, amount available	111,213 37

OPERATING AND MAINTAINING THE LOUISVILLE AND PORTLAND CANAL.

(Page 254.)

The fiscal year ending June 30, 1882, was remarkable for the number and duration of the high stages of the river. The average annual period during which the canal was required by the commerce of the Ohio River during the previous seven years was about three hundred and twenty days. During that year it was required only two hundred and fifty days, and was closed one hundred and fifteen days on account of high water only.

Three thousand nine hundred and sixty-four vessels passed through the canal, whose registered under-tonnage amounted to 904,343 tons. In addition to the general merchandise which they transported, 11,348,000 bushels of coal, 25,800 tons of iron ore, and 58,850 barrels of salt were carried by them.

The act of March 3, 1881, authorizes the Secretary of War to draw his requisition on the Secretary of the Treasury, from time to time, for the purpose of operating and keeping the canal in repair.

The total expenditures for the year ending June 30, 1883, were \$61,333.14, of which sum, \$4,000.91 was for repairing damages caused by the great flood of February, 1883, and \$2,692.18 was for permanent improvements.

ALLEGHENY RIVER, PENNSYLVANIA.

(Page 200.)

The result of the work of improvement, begun in 1879, has been to make navigation much safer and to deepen the low-water channel about 1 foot between Pittsburgh and Red Bank Creek, as well as on many rapids above that point.

July 1, 1882, amount available	\$1,890 28
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/> 16,890 28
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	16,082 59
July 1, 1883, amount available	816 69

MONONGAHELA RIVER, PENNSYLVANIA AND WEST VIRGINIA.

(Page 253.)

In 1872, before improvement, the depth at low water did not exceed 6 inches. The works now in progress are designed to afford a 6-foot navigation from Dunkard Creek, Pennsylvania, to Morgantown, West Virginia.

July 1, 1882, amount available	\$37,968 97
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	62,968 97
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$34,679 22
July 1, 1883, outstanding liabilities	4,990 40
	<hr/>
	39,669 62
July 1, 1883, amount available	23,299 35

ICE-HARBOR AT MOUTH OF MUSKINGUM.

(Page 197.)

Work begun in 1880 and in progress, designed to admit the largest Ohio River tow-boats, with their tows, into the lowest pool of the Muskingum River for shelter at all stages.

July 1, 1882, amount available	\$7,254 62
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
	47,254 62
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$38,653 97
July 1, 1883, outstanding liabilities	683 69
	<hr/>
	39,337 66
July 1, 1883, amount available	7,916 96

HARBOR OF REFUGE, NEAR CINCINNATI.

(Page 194.)

Begun in 1879. The two dikes built have been of benefit to the commerce of Cincinnati by successfully holding back ice-flows coming from above, besides having deepened the water on Four Mile Bar.

Amount appropriated by act passed August 2, 1882	\$16,000 00
July 1, 1883, amount available	16,000 00

KENTUCKY RIVER, KENTUCKY.

(Page 139.)

First appropriation, 1879, at which time there was no regular and permanent navigation, the five old locks and dams on the lower portions of the river, built and owned by the State of Kentucky, having become by disasters and neglect practically useless, and above them too little water in low stages with ripples and bars of rock and gravel in the channel.

The four lower locks have been rebuilt and opened to navigation, and the reconstruction of the fifth, and the construction of a new lock and dam have been commenced.

The navigation afforded by the work thus far accomplished has been active, and a depth of 6 feet maintained on about 82 miles of river.

This improvement is principally in the interest of the products of the forest, and of the coal and iron tributary to the river.

July 1, 1882, amount available	\$1 24
Amount appropriated by act passed August 2, 1882	225,000 00
	<hr/>
	225,001 24
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$116,191 51
July 1, 1883, outstanding liabilities	1,037 70
	<hr/>
	117,229 21
July 1, 1883, amount available	107,772 03

TRADEWATER RIVER, KENTUCKY.

(Page 140.)

First appropriation, 1881. Snags, overhanging trees, and other obstructions have been removed from the river as far as funds would admit, and a channel excavated through a rock bar at the mouth of the stream, which has already proved of benefit to navigation.

Before improvement 28,000 tons were annually shipped from this region, including about 8,000 tons of coal.

July 1, 1882, amount available	\$2 92
Amount appropriated by act passed August 2, 1882	3,500 00
	<hr/>
July 1, 1883, amount available	3,502 92

BIG SANDY RIVER, WEST VIRGINIA AND KENTUCKY.

(Page 139.)

First appropriation, 1878. Before improvement the natural channels were narrow and crooked with but 3 inches of water over shoals and ripples at low stages. There are now 18 inches over them at extreme low water, and from 20 to 24 inches at average low-water stages, with the work of improvement incomplete.

In the river and harbor act of 1880, provision was made for the construction of a lock and dam at Louisa, which has been begun. This will form a pool extending some distance up the Tug and Louisa forks for the security of timber rafts and coal, coming down the forks until it can be run to the Ohio River.

In 1882, the annual value of the trade on the river was reported to be \$2,854,366 and increasing.

July 1, 1882, amount available	\$89,204 12
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	114,204 12
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities, July 1, 1882	\$12,538 90
July 1, 1883, outstanding liabilities	100 50
	<hr/>
	12,639 40
July 1, 1883, amount available	101,564 72

GUYANDOTTE RIVER, WEST VIRGINIA.

(Page 217.)

First appropriation, 1878. Before improvement the river was obstructed with snags, rocks, and bars, and with relics of locks and dams built some twenty-five years ago for the benefit of navigation, under a charter from the State of Virginia.

The total length of river now more or less improved, is 119 miles. The object of the improvement is a raft navigation, with chutes 30 feet wide and eighteen inches deep for boats.

More rafts were run out of the river this spring than ever before.

Value of the trade of the river in 1882, \$975,250.

July 1, 1882, amount available	\$846 36
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	2,846 36
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	1,427 48
July 1, 1883, amount available	1,418 88

LITTLE KANAWHA RIVER, WEST VIRGINIA.

(Page 217.)

First appropriation, 1876. The Little Kanawha Navigation Company completed in 1874 the building of four locks and dams, making a slack-water navigation of 4 feet for 43 miles above Parkersburg.

The work done by the United States has been the removal of rock and other obstructions from the head of slack-water navigation up to Bulltown, a distance of 87 miles, and the commencement of a lock and dam which will extend slack-water navigation about 12 miles further than it exists at present.

The returns of the navigation company show a considerable increase of business since this clearing of the upper river.

July 1, 1882, amount available	\$48,663 58
Amount appropriated by act passed August 2, 1882	31,000 00
	<hr/>
	79,663 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$15,495 92
July 1, 1883, outstanding liabilities	1,899 96
	<hr/>
	17,395 88
July 1, 1883, amount available	62,267 70

WABASH RIVER, INDIANA AND ILLINOIS.

(Page 260.)

First appropriation for improvement, 1872, previous expenditures having been for surveys. Before improvement the river was only navigable at high stages. A lock at Grand Rapids and a few improvements at other points had been made by private enterprise, but they had become almost useless. Steamers drawing 2 feet now regularly navigate the river for 70 miles below Mount Carmel, and small boats can go from Vincennes to Terre Haute at stages of water not before possible.

Three million eighty-two thousand nine hundred and seven bushels of grain, besides large quantities of lumber and general merchandise passed over the river in the season of 1882.

Wabash River.—Below Vincennes.

July 1, 1882, amount available	\$444 11
Amount appropriated by act passed August 2, 1882.....	40,000 00
	<hr/> 40,444 11
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities.....	\$21,691 04
July 1, 1883, outstanding liabilities	659 14
	<hr/> 22,350 18
July 1, 1883, amount available.....	<hr/> <hr/> 18,093 93

Wabash River.—Between Vincennes and Lafayette.

July 1, 1882, amount available	\$4,023 30
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/> 34,023 30
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$19,058 07
July 1, 1883, outstanding liabilities.....	1,144 77
	<hr/> 20,202 84
July 1, 1883, amount available.....	<hr/> <hr/> 13,820 46

WHITE RIVER, INDIANA.

(Page 138.)

First appropriation, 1879. Before improvement the river was not navigable owing to snags and other obstructions. The work of improvement, as far as it has now progressed, has resulted in clearing the river entirely for a distance of 17 miles from its mouth, and partially so for 23 miles further. Work upon a new channel through an obstruction near the mouth of the river is in progress. No material benefit to commerce is expected from expenditures made until this channel is completed.

July 1, 1882, amount available.....	\$3,298 67
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/> 28,298 67
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$20,583 29
July 1, 1883, outstanding liabilities	1,185 19
	<hr/> 21,768 48
July 1, 1883, amount available	<hr/> <hr/> 6,530 19

HARBOR AT DULUTH, MINNESOTA.

(Page 169.)

First appropriation in 1871. There is now a depth of 16 feet in the inner harbor where formerly there were but 8 and 10 feet, and the area of anchorage ground has been largely increased and deepened to 15 feet.

The freight received and shipped by lake during 1882 amounted to 5,300,000,000 pounds.

Arrivals and departures of vessels of all kinds, 1,665.

Increase of arrivals of all kinds in 1882 over 1881, 162.

The arrivals and departures in 1873 were 740.

July 1, 1882, amount available	\$393 94
Amount appropriated by act passed August 2, 1882	45,000 00
	<hr/> 45,393 94
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$18,468 11
July 1, 1883, outstanding liabilities	5,599 11
	<hr/> 24,067 22
July 1, 1883, amount available	<hr/> <hr/> 21,326 72

SUPERIOR CITY ENTRANCE, AND DREDGING IN SUPERIOR BAY, WISCONSIN.

(Page 223.)

The work for this improvement, begun in 1867, has been the construction of piers at the natural entrance; shore and beach protection on Minnesota Point, and dredging the approaches to Superior City.

Before improvement the depth at entrance was 10 feet and navigation precarious; it is now 12½ feet and is about to be dredged to 15 feet; thence to the wharves at Superior City the depth is from 15 to 16 feet.

The value of the trade and commerce of Superior City for 1881 is stated to have been \$1,590,000.

July 1, 1882, amount available	\$4,461 58
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/> 44,461 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$14,999 81
July 1, 1883, outstanding liabilities	6,135 77
	<hr/> 21,135 58
July 1, 1883, amount available	23,326 00

HARBOR AT GRAND MARAIS, MINNESOTA.

(Page 169.)

This improvement, begun with the appropriation of 1879, is the creation of a harbor of refuge on the north shore of Lake Superior, between Duluth and the British Possessions, by the construction of a breakwater.

The harbor has been deepened so that vessels drawing 16 feet can now enter for shelter. The work is in progress and it is designed to enlarge the dredged area in the harbor, and by the completion of the breakwater to create additional anchorage space.

The depth of water before improvement only admitted vessels drawing 10 feet, and the harbor afforded but little shelter.

July 1, 1882, amount available	\$3,577 61
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/> 23,577 61
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$849 08
July 1, 1883, outstanding liabilities	2,917 24
	<hr/> 3,766 32
July 1, 1883, amount available	19,811 29

ONTONAGON HARBOR, MICHIGAN.

(Page 164.)

This improvement was begun with the appropriation of 1867, at which date the deposit at the mouth of Ontonagon River extended nearly half a mile into the lake, the channel across this bar having only a depth of 6 feet. The deep water in the harbor has been connected with deep water in the lake by a channel about 125 feet wide and 11 feet deep at low water, protected by two piers 200 feet apart.

The benefit to commerce is an improved inlet for supplies and an outlet for the forest, agricultural, and mining products of the vicinity.

July 1, 1882, amount available	\$565 76
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/> 20,565 76
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$3,592 90
July 1, 1883, outstanding liabilities	1,040 70
	<hr/> 4,633 60
July 1, 1883, amount available	15,932 16

EAGLE HARBOR, MICHIGAN.

(Page 160.)

First appropriation, 1866. The entrance to this harbor was obstructed by a rocky reef, upon which there was a depth of about 9 feet. There is now a protected channel of entrance through this reef with a width of 130 feet and a depth of 14 feet.

The benefit to commerce has been the development, up to the full requirements of navigation, of an entrance to the harbor, thereby permitting an inlet to supplies and an outlet for the mining products of the vicinity.

July 1, 1882, amount available	\$3,867 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	65 00
	<hr/> 3,802 53

MARQUETTE HARBOR, MICHIGAN.

(Page 162.)

In 1867, before improvement, this was a roadstead partially protected by the contiguous shore-lines and giving access to wharves and ore docks along the front of the town.

There is now a commodious roadstead, protected by a breakwater 2,010 feet in length, with its end resting in water over 30 feet deep.

The benefit to commerce is the increased protection of the wharves and ore docks of the port

and the formation of a harbor of refuge accessible to and largely used by the commerce of Lake Superior.

July 1, 1882, amount available.....	\$697 46
Amount appropriated by act passed August 2, 1882	16,000 00
	<hr/>
	16,697 46
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	6,574 32
	<hr/>
July 1, 1883, amount available.....	10,123 14

HARBOR OF REFUGE AT GRAND MARAIS, MICHIGAN.

(Page 161.)

First appropriation, 1880. Work commenced during the present fiscal year.

This harbor is about midway between Marquette and Sault Sainte Marie. It is an inclosed bay having an area of 300 acres, 240 of which have a depth of from 18 to 50 feet. The natural entrance from the lake is obstructed by a bar with a depth of only 6 feet.

The benefit to commerce will be, by the improvement of the entrance, the formation of a convenient and commodious harbor of refuge for the entire American commerce of Lake Superior, at a point where the present damage to commerce from a lack of such refuge is very great.

July 1, 1882, amount available.....	\$27,837 86
Miscellaneous receipts	84 00
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
	67,921 86
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$8,253 63
July 1, 1883, outstanding liabilities	1,939 98
	<hr/>
	10,193 61
	<hr/>
July 1, 1883, amount available.....	57,728 25

MANISTIQUE HARBOR, MICHIGAN.

(Page 162.)

First appropriation, 1880. The depth of the natural channel of entrance was originally 7 feet. Before improvement by the United States slab piers had been built on each side of the entrance to 10 feet water in the lake by private means. With part of the appropriations of 1880 and 1881 this depth was increased to 12 feet, but a storm having destroyed a considerable part of one of the piers, work was suspended by reason of the refusal of the company controlling the harbor to rectify their pier-lines when rebuilding their piers.

The commercial importance of this harbor is local and confined to one or two mill interests.

July 1, 1882, amount available.....	\$3,583 11
July 1, 1883, amount available.....	3,583 11

MOUTH OF CEDAR RIVER, WEST SIDE OF GREEN BAY, MICHIGAN.

(Page —.)

A new work. Originally the bar at the mouth of the river had a depth of about 3 feet. By private enterprise a slab pier has been built on one side of the entrance to the harbor and a channel dredged about 150 feet wide and 8 feet deep.

No expenditure has yet been made for the improvement of this channel.

Commercial benefit local, and confined for the present to one mill interest.

Amount appropriated by act passed August 2, 1882	\$15,000 00
July 1, 1883, amount expended during fiscal year	580 62
	<hr/>
July 1, 1883, amount available.....	14,419 38

MENOMONEE HARBOR, MICHIGAN.

(Page 230.)

In 1871, before improvement, a bar extended into Green Bay, over which the depth of water was about 6 feet.

The deep water in the harbor is now connected with the deep water of the bay by a channel 300 feet wide, not less than 10 feet deep, and including therein a channel 100 feet wide and 14 feet deep. The channel is protected by two parallel piers 400 feet apart.

The benefit to commerce is, that this entrance admits the heaviest draught of lumber vessels for the exportation of the very large forest products and the development of a water transportation for the general merchandise of the vicinity.

July 1, 1882, amount available	\$1 86
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/>
	15,001 86
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	603 35
	<hr/>
July 1, 1883, amount available.....	14,398 51

OCONTO HARBOR, WISCONSIN.

(Page 221.)

A new work recently begun with the combined appropriations of 1881 and 1882. By corporate work an artificial connection has been made between Oconto River and Green Bay, but a bar exists at the entrance of the river from the bay with not more than $3\frac{1}{2}$ feet water.

The benefit to commerce that will result from the improvement projected will be the formation of a channel of 8 feet from the deep water of the bay to that of the river, facilitating the shipment of the products of the forest, and the receipt of general merchandise.

July 1, 1882, amount available	\$10,000 00
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/> 25,000 00
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$7,541 10
July 1, 1883, outstanding liabilities	832 11
	<hr/> 8,373 21
July 1, 1883, amount available	16,626 79

PENSAUKEE HARBOR, WISCONSIN.

(Page —.)

A new work. No expenditure of the appropriation of 1882 has yet been made for purposes of construction.

The improvement proposed is the extension of a slab pier already built by private enterprise and the deepening of the present dredged channel of 7 feet to 10 feet, from the bay to the harbor, which will increase the facilities for shipping the products of the forest and the receipt of supplies.

The advantages will largely accrue to a single mill interest.

Amount appropriated by act passed August 2, 1882	\$10,000 00
July 1, 1883, amount expended during fiscal year	685 15
	<hr/> 9,314 85

GREEN BAY HARBOR, WISCONSIN.

(Page 219.)

First appropriation, 1866. Between the mouth of Fox River and deep water in Green Bay there formerly existed a very circuitous channel of about 4 miles, carrying about 10 feet of water. There is now a nearly straight channel about 2 miles long, 200 feet wide, and 13 feet deep for about half of its width, permitting the entrance of ordinary-sized vessels into the inner harbor, and the exportation of large quantities of agricultural and forest products, and the importation of considerable general merchandise.

This improvement is also the connecting link between the Fox or Wisconsin rivers and the Lakes which form one of the subdivisions of transportation routes between the Mississippi River and the seaboard.

Amount appropriated by act passed August 2, 1882.....	\$20,000 00
July 1, 1883, amount expended during fiscal year.....	\$7,091 82
July 1, 1883, outstanding liabilities	739 91
	<hr/> 7,831 73
July 1, 1883, amount available	12,168 27

HARBOR OF REFUGE AT THE ENTRANCE TO STURGEON BAY CANAL, WISCONSIN.

(Page 223.)

This is a construction to cover and protect the entrance to the canal from Lake Michigan. The first appropriation was made in 1873. The deep water in the canal has been connected with that in the lake by a channel about 75 feet wide, having a depth of 14 feet at low water and protected by converging piers.

The work of construction is nearly completed.

The canal shortens the distance between Lake Michigan and Green Bay about 100 miles, and benefits a large part of the commerce of Green Bay.

July 1, 1882, amount available	\$22 47
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/> 20,022 47
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$9,029 12
July 1, 1883, outstanding liabilities.....	2,634 75
	<hr/> 11,663 87
July 1, 1883, amount available	8,358 60

AHNEPEE HARBOR, WISCONSIN.

(Page 217.)

This improvement was begun with the appropriation of 1871. The entrance to the river was from 4 to 8 feet deep. The deep water in the lake is now connected with the river mouth by a

channel about 50 feet wide and 9 feet deep at low water, protected by two piers. Between the mouth of the river and the deep water above, a channel 100 feet wide has been nearly completed through the rocky bed of the river to a depth of about 10 feet at low water.

The benefit to commerce has been to admit the entrance of vessels to the inner harbor, furnishing an inlet for supplies, and an outlet for the forest and agricultural produce of the vicinity.

July 1, 1882, amount available	\$5,271 75
Amount appropriated by act passed August 2, 1882	12,000 00
	<hr/>
	17,271 75
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	17,145 98
	<hr/>
July 1, 1883, amount available	125 77

KEWAUNEE HARBOR, WISCONSIN.

(Page 220.)

Work for the improvement of this harbor was commenced in 1881. In front of the natural mouth of the river there is a bowlder bar, extending 2,000 feet into the lake, with only 1½ feetwater.

The work so far has been confined to the construction of 625 linear feet of pier.

The benefit to commerce will be the improvement of a channel connecting deep water of the inner harbor with the deep water of the lake.

July 1, 1882, amount available	\$2,870 27
Miscellaneous receipts	14 00
Amount appropriated by act passed August 2, 1882	12,000 00
	<hr/>
	14,884 27
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$5,724 75
July 1, 1883, outstanding liabilities	178 32
	<hr/>
	5,903 07
July 1, 1883, amount available	8,981 20

TWO RIVERS HARBOR, WISCONSIN.

(Page 223.)

Operations begun with the appropriation of 1871, at which time the bar off the mouth of the river had a depth of about 4 feet. The deep water in the harbor is now connected with the deep water in the lake by a channel 100 feet wide, with over 8 feet depth of water, and including an 11-foot channel 50 feet wide. The channel is protected by two parallel piers.

The benefit to commerce has been furnishing an inlet for considerable manufactured lumber and an outlet for the manufactures and agricultural products of the vicinity.

July 1, 1882, amount available	\$17 36
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	15,017 36
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	10,025 90
	<hr/>
July 1, 1883, amount available	4,991 56

MANITOWOC HARBOR, WISCONSIN.

(Page 220.)

A small appropriation was made for this harbor in 1852. In 1866 work was resumed, at which time the bar at the mouth of the river had a depth of about 4 feet. The deep water in the inner harbor is now connected with the deep water in the lake by a channel about 150 feet wide and 14 feet deep, protected by two parallel crib-piers. The improvement admits the entrance of the heaviest draught of lake vessels. A benefit to the general commerce has also resulted from the harbor of refuge which is afforded at this point.

July 1, 1882, amount available	\$30 33
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,030 33
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$7,473 03
July 1, 1883, outstanding liabilities	49 15
	<hr/>
	7,522 18
July 1, 1883, amount available	2,508 15

SHEBOYGAN HARBOR, WISCONSIN.

(Page 222.)

An appropriation was made in 1852 for this harbor, and an allotment of \$10,000 in 1864. In the interval between the first appropriation and 1866 the authorities of Sheboygan built crib-piers extending to about 10 feet water in the lake. The work since executed has been an extension of the Sheboygan work. In its natural condition there was a bar directly in front of the river mouth, with but about 4 feet water. The deep water in the harbor is now connected with that in the lake

90 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

by a channel about 150 feet wide and 10 feet deep at low water, furnishing an inlet for a large amount of general merchandise, and an outlet for the manufactures and agricultural products of the vicinity.

Amount appropriated by act passed August 2, 1882	\$30,000 00
July 1, 1883, amount expended during fiscal year	\$10,951 76
July 1, 1883, outstanding liabilities	4,416 63
	<hr/> 15,368 39
July 1, 1883, amount available	14,631 61

PORT WASHINGTON HARBOR (OZAUKEE), WISCONSIN.

(Page 221.)

First appropriation, 1870. In its natural condition the river was about 50 feet wide at its mouth, with a depth of about 2 feet, and less than 1 foot a short distance above the mouth. The improvement has been the construction of two interior artificial basins with an area of about 5½ acres, having a depth of 8 to 12 feet. The deep water in the lake is connected with these basins by a 10-foot channel about 75 feet wide, protected by two parallel crib piers.

The benefit to commerce has been the creation of an artificial harbor and entrance from the lake, furnishing an inlet to general merchandise and an outlet to the manufactures and agricultural products of the vicinity.

Miscellaneous receipts	\$20 00
Amount appropriated by act passed August 2, 1882	17,000 00
	<hr/> 17,020 00
July 1, 1883, amount expended during fiscal year	\$14,467 37
July 1, 1883, outstanding liabilities	2,469 68
	<hr/> 16,937 05
July 1, 1883, amount available	82 95

HARBOR OF REFUGE, MILWAUKEE BAY, WISCONSIN.

(Page 221.)

This work, commenced in 1881, is not yet sufficiently advanced to answer the requirements of a harbor of refuge, although it now affords considerable protection from northeasterly storms.

The additional security to navigation which will be afforded by this harbor extends to the greater portion of the commerce of the great lakes, and to the entire commerce of Lake Michigan.

July 1, 1882, amount available	\$42,759 90
Amount appropriated by act passed August 2, 1882	100,000 00
	<hr/> 142,759 90
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$49,634 17
July 1, 1883, outstanding liabilities	2,380 88
	<hr/> 52,015 05
July 1, 1883, amount available	90,744 85

MILWAUKEE HARBOR, WISCONSIN.

(Page 220.)

First appropriation for improvement, 1843, and appropriations made between the years 1843 and 1853. Expenditures by the city of Milwaukee from 1855 to 1870, \$445,971.

Work resumed by the United States with the appropriation of 1864.

The original depth of water at the entrance to the harbor before improvement was at times not more than 3½ feet. There is now a channel of 100 feet in width and 18 feet in depth for the whole length of the entrance piers.

COMMERCE.

In 1882:	
Arrivals	5,596
Tonnage	2,862,673
Departures	5,624
Tonnage	2,908,593
In 1866:	
Arrivals	3,761
Departures	3,687
July 1, 1882, amount available	\$5,107 95
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/> 15,107 95
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	979 32
July 1, 1883, amount available	14,128 63

RACINE HARBOR, WISCONSIN.

(Page 221.)

Appropriations were made for this harbor in 1844 and 1852. Work resumed with appropriation of 1864. Two hundred and twenty linear feet of crib-pier work were built by citizens of Racine in 1856-57.

The original depth of water over the bar at the entrance to the harbor before improvement was not more than 16 to 18 inches. In June last vessels drawing 13½ feet could enter the harbor without difficulty.

COMMERCE.

In 1882:	
Arrivals.....	1,504
Tonnage.....	548,758
Departures.....	1,505
Tonnage.....	548,735

In 1867 532 arrivals and 560 departures of sailing vessels alone; 42 steamers (with freight) arrived and cleared.

July 1, 1882, amount available.....	\$1,133 18
Amount appropriated by act passed August 2, 1882.....	7,000 00
	<hr/>
	8,133 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	1,245 39
	<hr/>
July 1, 1883, amount available.....	6,887 79

KENOSHA (SOUTHPORT) HARBOR, WISCONSIN.

(Page 219.)

First appropriation, 1844—none between 1852 and 1866, when work was resumed. Some dredging in the channel and some pier-work was done by private parties.

Before improvement the outlet was frequently obstructed by bars, but at times the discharge of the river would keep a passage open, for a few days, from 2 to 4 feet deep.

In June last vessels drawing not more than 11 feet could enter the harbor.

COMMERCE.

In 1882:	
Arrivals.....	192
Tonnage.....	27,161
Departures.....	188
Tonnage.....	26,456
In 1866:	
Arrivals.....	114
Departures.....	121

July 1, 1882, amount available...	\$878 93
Amount appropriated by act passed August 2, 1882.....	6,000 00
	<hr/>
	6,878 93
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	4,537 68
	<hr/>
July 1, 1883, amount available.....	2,341 25

WAUKEGAN HARBOR, ILLINOIS.

(Page 137.)

There is as yet no available harbor at this point. The improvement was commenced with the appropriation of 1881, but has not sufficiently advanced to be of any benefit to commerce.

July 1, 1882, amount available.....	\$12,990 53
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	32,990 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	24,312 32
	<hr/>
July 1, 1883, amount available.....	8,678 21

IMPROVEMENT OF FOX AND WISCONSIN RIVERS.

(Page 218.)

First appropriation for improvement 1867.

Thus far the benefits to commerce from expenditures made have been local. On Fox River from Portage to Green Bay, 160 miles, and on the Wisconsin from Portage to Sauk, 29 miles, the improvements have met all the demands of local commerce, so as to give a depth of 5 feet on the Lower Fox from Lake Winnebago to Green Bay, and on the Upper Fox 3 feet to Portage City. During the past season the channel of the Wisconsin has been improved so as to give a navigable channel of 4 feet for 10 miles below Portage.

Before improvement, through navigation was impracticable on the Upper Fox at low water, and the portion of the Wisconsin, which has been improved, was in the same condition.

The anticipated benefit to commerce cannot be stated until the work is so advanced as to give a permanent through navigable channel.

92 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

Commerce.—The amount of tolls collected from September 1, 1877, to July 31, 1882, was \$12,002, representing a single lockage of 2,400,426 tons passing through.

July 1, 1882, amount available	\$47,354 10
Tolls received and deposited to credit of appropriation	625 00
Fuel sold to officers deposited to credit of appropriation	178 75
Amount appropriated by act passed August 2, 1882	200,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	248,157 85
July 1, 1882	113,390 78
	<hr/>
July 1, 1883, amount available	134,767 07

CHICAGO HARBOR, ILLINOIS.

(Page 136.)

The first appropriation, made in 1833, was expended in opening a straight outlet from the river into the lake, and commencing the pier work, since which the harbor has gradually been extended to its present proportions. The benefit to commerce cannot be justly estimated, as between the time of the first appropriation and the present, Chicago has grown from a village to a city of upwards of 600,000 inhabitants.

The improvements in progress, when completed, will afford an outer harbor for vessels seeking the port, and the breakwater a safe protection to all vessels driven to this end of the lake under stress of weather.

Number of vessels entered during the last year, 12,186; cleared, 12,340.

July 1, 1882, amount available	\$41,852 55
Amount appropriated by act passed August 2, 1882	200,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$130,843
July 1, 1883, outstanding liabilities	65,357
	<hr/>
	196,201 15
	<hr/>
July 1, 1883, amount available	45,651 40

HARBOR AT CALUMET, ILLINOIS.

(Page 135.)

First appropriation 1870, at which time the outlet of the river had been closed for many years by a bar visible above the lake level at certain stages. There is now a good entrance with 15 feet water in the channel and a depth of not less than 12½ feet in the harbor.

Extensive establishments are constantly locating at this point, attracted by the harbor and railroad facilities. It is destined to become the center of vast commercial industries.

Vessels entered during the last year, 537; cleared, 532.

July 1, 1882, amount available	\$1,013 45
Amount appropriated by act passed August 2, 1882	35,000 00
	<hr/>
	36,013 45
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$5,354 34
July 1, 1883, outstanding liabilities	24,286 73
	<hr/>
	29,641 07
	<hr/>
July 1, 1883, amount available	6,372 38

ILLINOIS RIVER.

(Page 137.)

The first appropriation in 1852 was applied to dredging channels through bars. The work of improvement was resumed with the appropriation of 1869—previous appropriations having been applied to surveys—and has resulted in giving a navigable depth of 4 feet over numerous bars. The natural channel was narrow and crooked, with not more than 18 inches depth in the shoalest places, and frequently obstructed by dangerous snags, the removal of which, together with the construction of several miles of dikes and jetties for the maintenance of the deepened channels, have essentially promoted the safe navigation of the river and the commercial interests of that section.

The completion of the lock foundation at Copperas Creek, and the commencement of locks at La Grange and Kampsville, are a part of the slackwater system adopted and designed to secure still larger facilities of a more permanent character.

The present improvement, when completed, will afford a through water communication from the Mississippi to Lake Michigan.

July 1, 1882, amount available	\$281,319 53
Amount appropriated by act passed August 2, 1882	175,000 00
	<hr/>
	456,319 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$150,685 23
July 1, 1883, outstanding liabilities	15,120 12
	<hr/>
	165,805 35
	<hr/>
July 1, 1883, amount available	290,514 18

MICHIGAN CITY, INDIANA.

(Page 137.)

Appropriations made at intervals between the years 1836 and 1852. The work ultimately went to decay for want of funds for its preservation, and was abandoned. A private company, organized in 1864, expended \$100,000 in pier work and general improvement. The United States resumed work with the appropriation of 1866. The improvement since made has been such that the commerce of the port has increased fivefold. The largest class of lake vessels can now enter the harbor at all times. Receipts during 1882 are reported at not less than \$4,000,000.

Outer harbor:

July 1, 1882, amount available	\$1,011 50
Amount appropriated by act passed August 2, 1882	60,000 00
	<hr/>
	61,011 50
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$35,007 53
July 1, 1883, outstanding liabilities	6,536 52
	<hr/>
	41,544 05
July 1, 1883, amount available	<hr/>
	19,467 45
	<hr/>
<i>Inner harbor:</i>	
July 1, 1882, amount available	\$406 06
Amount appropriated by act passed August 2, 1882	20,000 00
	<hr/>
	20,406 06
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$9,905 31
July 1, 1883, outstanding liabilities	1,192 20
	<hr/>
	11,097 51
July 1, 1883, amount available	<hr/>
	9,308 55

NEW BUFFALO HARBOR, MICHIGAN.

(Page 164.)

First appropriation, 1852. A Board of Engineers recommended, in 1868, the abandonment of the harbor owing to the want of local commerce and the decay of business. But the appropriation of 1866 being considered mandatory, work was resumed upon the harbor. Since 1872 expenditures have been confined to repairs. The appropriation of 1882 is held under advisement.

To comply with a resolution of the House of Representatives of February, 1882, a survey was made and estimates submitted for a harbor of refuge here.

The place is of no commercial importance, but the locality well suited for a harbor of refuge.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount available	5,000 00

CHARLEVOIX HARBOR, MICHIGAN.

(Page 159.)

First appropriation, 1876. The average width of the original channel of entrance was 75 feet, the depth varied from 2 to 6 feet. There is now a channel 90 feet wide with a central depth of 12 feet.

Vessels entered and cleared year ending June 30, 1882, 670.

The principal traffic is in products of the forest.

July 1, 1882, amount available	\$89 17
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,089 17
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$655 90
July 1, 1883, outstanding liabilities	4,567 87
	<hr/>
	5,223 77
July 1, 1883, amount available	<hr/>
	4,865 40

FRANKFORT HARBOR, MICHIGAN.

(Page 160.)

First appropriation, 1866 (Aux Bec Scies). The original outlet, which is now closed, had a depth of 3 to 4 feet. There is now a different outlet with a channel 200 feet wide, having a central depth of 12 feet.

Vessels entered and cleared year ending June 30, 1882, 537.

July 1, 1882, amount available	\$1,176 36
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	16,176 36
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$6,644 97
July 1, 1883, outstanding liabilities	4,110 58
	<hr/>
	10,755 55
July 1, 1883, amount available	<hr/>
	5,420 81

HARBOR OF REFUGE AT PORTAGE LAKE, MICHIGAN.

(Page 165.)

First appropriation, 1879. No natural channel existed before the improvement was begun. The amount expended to date has resulted in a channel 6 feet deep and about 200 feet wide. The project adopted is for a channel of 18 feet depth.

This harbor is located at about the middle of a dangerous line of coast with no adequate harbor of refuge on either side for a distance of 75 miles.

When completed it will be of great value to the general commerce of the lakes.

July 1, 1882, amount available.....	\$315 84
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/> 25,315 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$10,846 88
July 1, 1883, outstanding liabilities.....	4,355 13
	<hr/> 15,202 01
July 1, 1883, amount available.....	10,113 83

MANISTEE HARBOR, MICHIGAN.

(Page 162.)

First appropriation, 1867. Before improvement by the United States a narrow channel of not more than 8 feet depth had been made by local enterprise. The amount expended to date has resulted in a channel 170 feet wide and from 12 to 14 feet deep.

The harbor is usually open to navigation during the whole year, the current of the river being sufficient to keep it clear of floating ice.

It is the terminus of a branch of the Flint and Pere Marquette Railroad, and is used by the largest class of steam and sail vessels. Number of vessels entered and cleared in year ending June 30, 1882, 3,427.

July 1, 1882, amount available.....	\$3,583 46
Amount appropriated by act passed August 2, 1882.....	15,000 00
	<hr/> 18,583 46
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$3,322 32
July 1, 1883, outstanding liabilities.....	950 41
	<hr/> 4,272 73
July 1, 1883, amount available.....	14,310 73

LUDINGTON (PÉRE MARQUETTE) HARBOR, MICHIGAN.

(Page 162.)

First appropriation, 1867. Before improvement by the United States a narrow channel of about 7 feet depth had been made by private enterprise. There is now a channel 200 feet wide between the piers with a central depth of 11½ feet.

This is the terminus of the Flint and Pere Marquette Railroad, which has a daily line of steamers running from Ludington to Milwaukee.

Navigation is usually maintained throughout the year, and it is one of the largest lumber-producing centers in the Northwest.

Number of vessels entered and cleared in year ending June 30, 1882, 2,206.

July 1, 1882, amount available.....	\$1,263 84
Amount appropriated by act passed August 2, 1882.....	12,000 00
	<hr/> 13,263 84
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$6,301 56
July 1, 1883, outstanding liabilities.....	879 23
	<hr/> 7,180 79
July 1, 1883, amount available.....	6,083 05

PENTWATER HARBOR, MICHIGAN.

(Page 164.)

First appropriation, 1867. Before improvement the channel of entrance was narrow with a depth of about 4 feet. The width of channel between the piers is now 150 feet, with an available depth of 9 feet.

Pentwater contains about 1,200 inhabitants, and is the terminus of the Chicago and West Michigan Railroad. Number of vessels entered and cleared, year ending June 30, 1882, 597.

July 1, 1882, amount available.....	\$50 23
Amount appropriated by act passed August 2, 1882.....	10,000 00
	<hr/> 10,050 23
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	3,199 76
July 1, 1883, amount available.....	6,850 47

WHITE RIVER HARBOR, MICHIGAN.

(Page 168.)

First appropriation, 1869. The original channel of entrance was narrow and crooked, with a depth of about 5 feet. A new channel has been opened in a straight cut from White Lake to Lake Michigan, having now a depth of 8 feet, which will ultimately be increased to 12 feet.

The lumber trade of this port is quite large, and on three occasions during the past six years private parties have dredged the entrance to make it passable for vessels drawing 9 feet.

July 1, 1882, amount available	\$105 55
Amount appropriated by act passed August 2, 1882	12,000 00
	<hr/>
	12,105 55
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$3,906 87
July 1, 1883, outstanding liabilities	549 52
	<hr/>
	4,456 39
July 1, 1883, amount available	7,649 16

MUSKEGON HARBOR, MICHIGAN.

(Page 163.)

First appropriation, 1867. The original channel had been irregularly defined by slab piers, which gave fair access, but the navigation was limited to 7 feet depth by a bar at the end of the piers. The depth of water is now from 15 to 18 feet, and the distance between the piers is being increased to 300 feet. This is an important harbor; it has the heaviest lumber-trade, and is constantly used by a large class of steam and sail vessels.

Number of vessels entered and cleared year ending June 30, 1882, 6,689.

July 1, 1882, amount available	\$6,891 13
Amount appropriated by act passed August 2, 1882	25,000 00
	<hr/>
	31,891 13
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$13,157 27
July 1, 1883, outstanding liabilities	10,249 68
	<hr/>
	23,406 95
July 1, 1883, amount available	8,484 18

GRAND HAVEN HARBOR, MICHIGAN.

(Page 160.)

The natural outlet was wide, with a depth of 9 feet. A small appropriation was made in 1852 for its preservation. The present improvement was begun with the appropriation of 1866. There is now a width of way between the piers of 400 feet, with a depth of water at entrance of 18 to 23 feet.

Lines of steamers ply in connection with the railroads between this port and Chicago and Milwaukee, and transfer business is continued throughout the year.

The harbor is sought by vessels of all classes during heavy weather.

Number of vessels entered and cleared year ending June 30, 1882, 3,409.

July 1, 1882, amount available	\$41,779 18
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
	81,779 18
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$62,455 29
July 1, 1883, outstanding liabilities	4,445 14
	<hr/>
	66,900 43
July 1, 1883, amount available	14,878 75

GRAND RIVER, BELOW GRAND RAPIDS, MICHIGAN.

(Page 161.)

First appropriation, 1881. The object of this improvement is to secure a depth of 4 feet at low water from Grand Rapids to the mouth of the river. The work so far accomplished has been the making of a narrow channel of the required depth through two shoals below Grand Rapids.

The work has proved so heavy that its cost will be far in excess of the original estimate.

The trade is carried on by a few light-draught steamers only.

July 1, 1882, amount available	\$2,363 30
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	17,363 30
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$5,881 54
July 1, 1883, outstanding liabilities	1,016 54
	<hr/>
	6,898 08
July 1, 1883, amount available	10,465 22

BLACK LAKE HARBOR, MICHIGAN.

(Page 158.)

First appropriation of 1852 was expended in preparations for opening a new outlet into Lake Michigan, and about the year 1860 private parties made an opening at a cost of \$30,000. The improvement was continued by the United States with the appropriation of 1866 and subsequent ones; at that time the depth of water at the entrance was $5\frac{1}{2}$ feet. It has now a central depth of 9 to 10 feet.

The trade of the place has become local and small.

July 1, 1882, amount available	\$136 75
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,136 75
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,227 80
	<hr/>
July 1, 1883, amount available	8,908 95

SAUGATUCK HARBOR (MOUTH OF KALAMAZOO), MICHIGAN.

(Page 167.)

The first work done by the United States was with an allotment from the appropriation of 1868; previous to which, private parties had expended \$30,000 in well constructed slab piers to confine the current to a width of about 160 feet. The depth of water in 1869, about 12 feet at the entrance; the present depth is 10 feet. All the old work has been rebuilt by the United States.

The commerce of the place is local and has greatly fallen off.

July 1, 1882, amount available	\$161 25
Amount appropriated by act passed August 2, 1882	8,000 00
	<hr/>
	8,161 25
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$1,005 28
July 1, 1883, outstanding liabilities	107 50
	<hr/>
	1,112 78
July 1, 1883, amount available	7,048 47

SOUTH HAVEN HARBOR, MICHIGAN.

(Page 168.)

First appropriation, 1867, previous to which the local authorities had expended from \$18,000 to \$20,000 in pier work; the depth of water between piers was $7\frac{1}{2}$ feet and width of way 85 feet. The old piers have been entirely replaced by new work and the channel-way widened to 170 feet. The central depth between the piers is now from 10 to 13 feet.

This is now the terminus of a branch of the Michigan Central Railroad, with a line of propellers plying to Chicago.

Number of vessels entered and cleared, year ending June 30, 1882, 508.

July 1, 1882, amount available	\$1,933 65
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	11,933 65
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$6,037 06
July 1, 1883, outstanding liabilities	2,211 69
	<hr/>
	8,248 75
July 1, 1883, amount available	3,684 90

SAINT JOSEPH'S HARBOR AND CHANNEL LEADING TO BENTON HARBOR, MICHIGAN.

(Page 166.)

Appropriations made at intervals, for Saint Joseph, between 1836 and 1852. Work resumed in 1864 in continuation of plan originally adopted. Before improvement the river had its outlet to the southward of the present entrance, which has now a depth of 13 to 19 feet. The Benton Canal has been deepened and partly revetted.

The trade of the two ports is large and rapidly increasing. The improvements thus far made are regarded by those interested as very satisfactory.

July 1, 1882, amount available	\$407 22
Amount appropriated by act passed August 2, 1882	12,000 00
	<hr/>
	12,407 22
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	3,802 46
	<hr/>
July 1, 1883, amount available	8,604 76

SAINT MARY'S FALLS CANAL AND SAINT MARY'S RIVER, MICHIGAN.

(Page 167.)

The canal was originally built by the State of Michigan from a land grant by the United States, and opened in 1855. It admitted the passage of boats of not more than 11 feet draught, and tolls were exacted from all except United States vessels.

By the construction of a new and larger canal, as also by the deepening of the channel through the shoals in Saint Mary's River above and below the falls, vessels drawing 16 feet, the largest on the lakes, now pass between Lake Huron and Lake Superior, and the canal is free from tolls.

July 1, 1882, amount available	\$74,054 66
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$70,597 19
July 1, 1883, outstanding liabilities	332 31
	<hr/>
	70,929 50
July 1, 1883, amount available	3,125 16

HAY LAKE CHANNEL OF SAINT MARY'S RIVER, MICHIGAN.

(Page —.)

A new work. First appropriation, August 2, 1882. The opening of this channel will shorten navigation 15 miles in 35, and will admit the passage of vessels drawing 16 feet, at night as well as day.

Received from sale of fuel	\$39 38
Amount appropriated by act passed August 2, 1882	200,000 00
	<hr/>
	200,039 38
July 1, 1883, amount expended during fiscal year	\$10,273 33
July 1, 1883, outstanding liabilities	3,449 03
	<hr/>
	13,722 41
July 1, 1883, amount available	186,316 97

CHEBOYGAN HARBOR, MICHIGAN.

(Page 159.)

In 1871, before improvement, the depth at the entrance to this harbor was 6 feet, and in the river 8 feet.

There is now, as the resulting benefit to commerce, an available depth of 12 feet in both.

July 1, 1882, amount available	\$269 42
Received from sale of fuel	3 00
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	10,272 42
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$10,031 40
July 1, 1883, outstanding liabilities	120 00
	<hr/>
	10,151 40
July 1, 1883, amount available	121 02

THUNDER BAY HARBOR (ALPENA), MICHIGAN.

(Page 158.)

There was originally a depth of only 7 feet over the bar at the mouth of the river, which was increased to 12 feet by private parties. At this time the depth is 10 feet. The act of August 2, 1882, appropriates \$15,000 for increasing the depth to 14 feet.

Very little benefit to commerce has resulted from the small amount previously appropriated.

July 1, 1882, amount available	\$109 52
Amount appropriated by act passed August 2, 1882	15,000 00
	<hr/>
	15,109 52
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$2,844 74
July 1, 1883, outstanding liabilities	1,597 20
	<hr/>
	4,441 94
July 1, 1883, amount available	10,667 58

AU SABLE HARBOR, MICHIGAN.

(Page 158.)

In 1867, before improvement, the depth of water on the bar was $4\frac{1}{2}$ feet, and in the harbor 4 feet. It is now 7 feet on the bar, and 8 in the harbor.

But little benefit to commerce has resulted from the improvements at this locality, owing to the constant re-formation of the bar at the mouth of the river.

July 1, 1882, amount available	\$60 95
Amount appropriated by act passed August 2, 1882	5,000 00
	<hr/>
	5,060 95
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	160 40
	<hr/>
July 1, 1883, amount available	4,900 55

SAGINAW RIVER, MICHIGAN.

(Page 165.)

In 1866, before improvement, there was a navigable channel of 8 feet over the bar at the mouth of the river. It is now 12 feet, with a least width of 75 feet. In the river above Bay City the improvements have allowed vessels drawing 10 feet to reach East Saginaw, where before not more than 8 feet existed. The work in progress is designed to increase the navigable capacity to 12 feet, with a corresponding benefit to commerce.

July 1, 1882, amount available	\$2,517 23
Received from sale of fuel	10 50
Amount appropriated by act passed August 2, 1882	125,000 00
	<hr/>
	127,527 73
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$4,030 35
July 1, 1883, outstanding liabilities	7,203 19
	<hr/>
	11,233 54
July 1, 1883, amount available	116,294 19

SEBEWAING HARBOR, MICHIGAN.

(Page 168.)

The first appropriation for this harbor was made in 1875. The navigable capacity of the channel from Saginaw Bay to the mouth of the river has been increased from 3 feet to 6 feet in depth, to the benefit of local commerce.

The general commerce of the lakes has not been benefited by this improvement, owing to its limited extent.

HARBOR OF REFUGE, SAND BEACH, LAKE HURON, MICHIGAN.

(Page 161.)

This work was begun in 1871. There is now, where no harbor previously existed, a sheltered area, easy of access, covering 160 acres, over which there is a navigable depth of 18 feet and more, or 300 acres, with a depth of not less than 12 feet, forming a harbor of refuge to vessels during storms on a coast which, for 138 miles, had no harbor.

Five thousand seven hundred and ten vessels, aggregating 1,641,306 tons, have sought refuge here from storms since 1877.

July 1, 1882, amount available	\$48,331 14
Received from sale of fuel	174 37
Amount appropriated by act passed August 2, 1882	75,000 00
	<hr/>
	123,555 51
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$69,034 76
July 1, 1883, outstanding liabilities	7,959 05
	<hr/>
	76,993 81
July 1, 1883, amount available	46,561 70

SAINT CLAIR RIVER, AT PORT HURON, MOUTH OF BLACK RIVER, MICHIGAN.

(Page 165.)

The navigable capacity of this locality was, in 1872, before improvement, only 10 feet depth; it is now 15 feet.

The benefit to the general commerce of the lakes has been a free access to the water front of Port Huron, and to allow vessels under 15-foot draught to navigate the river without crossing to the Canada shore, and the removal of a dangerous shoal in the river.

PINE RIVER, AT ITS JUNCTION WITH SAINT CLAIR RIVER, MICHIGAN.

(Page 165.)

The navigable capacity, from the entrance to the river for 4,000 feet up-stream, has been increased from 9 feet before improvement, in 1875, to 12 feet, and for the further distance of a mile from 7 to 9 feet.

The benefit to commerce has been to allow the direct shipment of large quantities of bricks made on the banks of Pine River, that had formerly to be hauled by land to the Saint Clair River for shipment.

ICE-HARBOR, BELLE RIVER, MICHIGAN.

(Page 158.)

This improvement, begun in 1880, is still unfinished and is designed as a secure harbor for vessels during winter, and from the danger of being crushed by the breaking up of the ice in the spring.

During the present winter it has already been filled with vessels laid up for the season as far as its present capacity would admit.

July 1, 1882, amount available	\$180 67
Received from sale of fuel.....	25 13
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	5,205 80
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	5,085 04
	<hr/>
July 1, 1883, amount available	120 76

SAINT CLAIR FLATS SHIP-CANAL.

(Page 165.)

Before the present improvement, in 1866, the depth of water in this locality was scarcely sufficient for the passage of vessels drawing 10 feet, and the channel was narrow, crooked, and difficult of navigation. There is now a straight channel 200 feet wide and 16 feet deep, or 300 feet wide and 13 feet deep, with a saving of distance of more than a mile over the route.

The whole commerce of the lakes has been benefited by this important cut-off in the great thoroughfare from Lake Erie to Lake Huron.

July 1, 1882, amount available	\$1,173 38
Amount allotted for operating and care.....	5,000 00
	<hr/>
	6,173 38
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$5,110 37
July 1, 1883, outstanding liabilities	558 50
	<hr/>
	5,668 87
July 1, 1883, amount available.....	504 51

CLINTON RIVER, MICHIGAN.

(Page 159.)

First appropriation, August 30, 1852, but the present improvement dates from 1870, owing to the deterioration of the work left unfinished for want of appropriation between those dates.

There is now a good channel of 8 feet across the bar at the mouth of the river, where before improvement it was but 2½ feet.

The benefits to commerce from the improvement are local and unimportant.

July 1, 1882, amount available	\$502 84
Received from sale of fuel.....	39 38
Amount appropriated by act passed August 2, 1882.....	6,000 00
	<hr/>
	6,542 22
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882	\$5,969 93
July 1, 1883, outstanding liabilities	150 00
	<hr/>
	6,119 93
July 1, 1883, amount available	422 29

DETROIT RIVER AT LIME-KILN CROSSING, MICHIGAN.

(Page 159.)

This work, commenced in 1876, is still in progress. The present channel admits of vessels drawing 14 feet. The improvement is designed to increase the depth to 18 feet.

The commerce of the entire chain of lakes will be benefited by this work.

100 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The improved channel lies entirely in American waters and forms the boundary between the United States and Canada.

July 1, 1882, amount available.....	\$1,016 27
Received from sale of fuel.....	13 12
Amount appropriated by act passed August 2, 1882	60,000 00
	<hr/>
	61,029 39
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$36,991 58
July 1, 1883, outstanding liabilities	16,520 25
	<hr/>
	53,511 83
July 1, 1883, amount available	<hr/>
	7,517 56

MONROE HARBOR, MICHIGAN.

(Page 163.)

In 1835, before improvement, the approach to the town of Monroe was through a narrow and crooked channel, from Lake Erie through La Plaisance Bay, with a least depth of 6 feet. There is now a straight channel of 100 feet width with a least depth of 9½ feet.

When this improvement was commenced Monroe was a place of much importance. Its commerce has declined. But twenty-eight vessels entered and cleared in 1881.

July 1, 1882, amount available.....	\$16 45
Amount appropriated by act passed August 2, 1882	1,000 00
	<hr/>
	1,016 45
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	522 06
July 1, 1883, amount available	<hr/>
	494 39

LA PLAISANCE BAY, MICHIGAN.

(Page 161.)

The appropriations made between the years 1827 and 1836 were applied to the construction and maintenance of a pier at the entrance to this bay. For want of subsequent appropriation, and in consequence of the decline of the commerce of Monroe, as well as the construction of a new channel, this pier was permitted to go to decay.

TOLEDO HARBOR, OHIO.

(Page 198.)

In 1866, before improvement, the approach from the lake through Maumee Bay was by an intricate and narrow channel with a least depth of 11 feet. There is now a dredged channel 7½ miles long, from 15 to 17 feet deep, having a least width of 200 feet.

The amount of commerce is large and constantly increasing. Value of exports in 1881, \$1,782,842. Vessels entered and cleared, 4,532.

July 1, 1882, amount available	\$22,669 17
Amount appropriated by act passed August 2, 1882.....	50,000 00
	<hr/>
	72,669 17
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$28,941 44
July 1, 1883, outstanding liabilities	908 55
	<hr/>
	29,849 99
July 1, 1883, amount available	<hr/>
	42,819 18

PORT CLINTON HARBOR, OHIO.

(Page 197.)

Before improvement, in 1866, the channel of entrance was narrow, with a least depth of 5 feet. There is now a depth of 9 feet on the outer bar and between the piers.

The amount of commerce to be benefited by this improvement has been diminishing since 1869. In 1881 thirty-one vessels cleared.

July 1, 1882, amount available	\$824 53
Amount appropriated by act passed August 2, 1882	6,000 00
	<hr/>
	6,824 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	829 36
July 1, 1883, amount available	<hr/>
	5,995 17

SANDUSKY CITY HARBOR, OHIO.

(Page 198.)

Appropriations were made for this locality in 1826, 1844, and 1852. In 1866, before the present improvement, the depth of water on the bar at the entrance to Sandusky Bay was 10 feet. There is now a channel through the bar 200 feet wide and 14 feet deep. Through the bay the channel is 200 feet wide and 15 feet deep.

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 101

This is the lake terminus of several important railroads. The commerce has become large and is rapidly increasing. In 1881, value of imports, \$2,512,503; vessels entered, 925.

July 1, 1882, amount available	\$1,201 52
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/>
	11,201 52
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$7,173 51
July 1, 1883, outstanding liabilities	651 42
	<hr/>
	7,824 93
July 1, 1883, amount available	3,276 59

SANDUSKY RIVER, OHIO.

(Page 198.)

In 1867, before improvement, the river was obstructed by bars having a least depth of 5 feet. There is now a good channel with a least depth of 9 feet from Fremont to Sandusky Bay.

The benefit to commerce has been this increase of depth. The value of the trade to Fremont is not known.

July 1, 1882, amount available	\$20 78
Amount appropriated by act passed August 2, 1882	4,000 00
	<hr/>
	4,020 78
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	3,392 31
July 1, 1883, amount available	628 47

HURON HARBOR, OHIO.

(Page 196.)

Appropriations were made for this locality at intervals between the years 1826 and 1852, and since 1866. Before improvement the river was entirely closed to commerce by a bar at its mouth. There is now a channel 140 feet wide and 15 feet deep through the bar; 15 feet deep between the piers, and 18 feet deep in the river.

The commerce of this place is at present small, with good prospects of revival from the completion of the Wheeling and Lake Erie Railroad, of which this is the terminus, and by which extensive slips and docks are being built here.

July 1, 1882, amount available	\$2,231 58
Amount appropriated by act passed August 2, 1882	2,500 00
	<hr/>
	4,731 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	4,685 95
July 1, 1883, amount available	45 63

VERMILLION HARBOR, OHIO.

(Page 199.)

Appropriations made in 1836, 1837, 1838, and work resumed in 1866. Before improvement navigation was obstructed by a bar at the mouth of the river which was bare at low water.

There is now a channel 70 feet wide with a least depth of 11½ feet to a rock bottom.

Stone and lumber are shipped in considerable quantities from this harbor. The benefit to commerce unknown.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount expended during fiscal year	492 34
	<hr/>
July 1, 1883, amount available	2,507 66

BLACK RIVER HARBOR, OHIO.

(Page 193.)

Appropriations were made at intervals between the years 1828 and 1852. Work resumed in 1864. Before improvement there were but 3 feet upon the bar at the mouth of the river. There is now a channel 200 feet wide with a least depth of 16 feet.

The commerce is increasing and the harbor rapidly growing in importance. It is a railroad terminus. One hundred and seventy-four vessels entered in 1881. Value of exports, \$307,000.

July 1, 1882, amount available	\$2,949 48
Amount appropriated by act passed August 2, 1882	7,000 00
	<hr/>
	9,949 48
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	821 87
July 1, 1883, amount available	9,127 61

102 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

ROCKY RIVER, OHIO.

(Page 197.)

First appropriation in 1872. There was less than 5 feet upon the bar at entrance to Rocky River before improvement; there is now a channel 100 feet wide with a least depth of 6 feet. It is a place of no commerce at present.

July 1, 1882, amount available.....	\$1,586 37
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	1 06
July 1, 1883, amount available.....	1,585 31

CLEVELAND HARBOR, OHIO.

(Page 194.)

Appropriations made at intervals between the years 1825 and 1852. Work resumed in 1864. In 1825, before improvement, the depth of water at entrance to Cuyahoga River was 3 feet. There is now a good channel of entrance to harbor with a least depth of 17 feet. The breakwater designed to form a harbor of refuge is about two-thirds completed. The extension of the pier, which is to form the east side of the breakwater, has still to be appropriated for. The completion of the remaining parts is now contracted for.

This has been made one of the most important harbors on the lakes. In 1881 the value of imports was \$60,806,008; exports, \$34,030,757; 3,151 vessels entered and 3,096 vessels cleared.

July 1, 1882, amount available.....	\$213,271 70
Amount appropriated by act passed August 2, 1882.....	175,000 00
	388,271 70
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$128,661 18
July 1, 1883, outstanding liabilities.....	8,876 18
	137,537 36
July 1, 1883, amount available.....	250,734 34

FAIRPORT HARBOR (GRAND RIVER), OHIO.

(Page 196.)

Appropriations made at intervals between the years 1825 and 1852. Work resumed in 1864. Before improvement the entrance to Grand River was entirely closed by a dry sand bar. There is now a channel 200 feet wide, with a least depth of 16 feet.

Large and increasing commerce has been benefited by this improvement.

July 1, 1882, amount available.....	\$5,368 01
Amount appropriated by act passed August 2, 1882.....	10,000 00
	15,368 01
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	1,772 24
July 1, 1883, amount available.....	13,595 77

CONNEAUT HARBOR, OHIO.

(Page 195.)

At the time of the first appropriation for this harbor, 1829, the depth of water at the entrance was but 2 feet; this was increased by the construction of piers and by dredging to 11 feet in 1838. After which time, until 1866, there were but two appropriations, at long intervals, and upon the resumption of the improvement in 1867 the depth was found reduced to 8½ feet.

The present depth is less. The piers are now in a dilapidated condition; a large breach has been made through one of them by storms, and the superstructure of the remaining part is much decayed.

The commerce of this place has diminished and is now very small.

July 1, 1882, amount available.....	\$231 23
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	178 05
July 1, 1883, amount available.....	53 18

ASHTABULA HARBOR, OHIO.

(Page 193.)

In 1826, before improvement, the depth of water at entrance was 2 feet. This was increased to 9 feet with the appropriations made between that date and 1838.

Upon the resumption of the improvement in 1867 the depth was found reduced to 7½ feet. It is now 15 feet.

The commerce of Ashtabula is rapidly increasing, it being now the terminus of the Pennsylvania and other railroads.

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 103

In 1867, 151 vessels entered and cleared; in 1881, 1,037.

July 1, 1882, amount available	\$3,161 43
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	23,161 43
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,992 00
	<hr/>
July 1, 1883, amount available.....	21,169 43

ERIE HARBOR, PENNSYLVANIA.

(Page 201.)

The work of improvement was begun with the appropriation of 1824, at which time the depth at entrance was 6 feet. In 1835 it had been increased to 13 feet. As but two appropriations were made, at long intervals, between the years 1838 and 1864, on the resumption of work in 1864 the depth was found reduced to 9 feet. It is now 16 feet.

Benefit to commerce: Tonnage of vessels entered and cleared in 1867, 421,874; in 1882, 1,510,350.

July 1, 1882, amount available	\$15,997 13
Amount appropriated by act passed August 2, 1882.....	20,000 00
	<hr/>
	35,997 13
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	14,720 60
	<hr/>
July 1, 1883, amount available	21,276 53

CUNNINGHAM CREEK, LAKE ERIE, OHIO.

(Page 195.)

First appropriation, 1826. This improvement was not for the purpose of obtaining a navigable channel through the mouth of the creek, but to obtain a shelter for vessels, independent of access to the interior.

The plan adopted was that of parallel piers, running into the lake, 475 feet apart, with an outer protection by a breakwater parallel to the shore. The piers were carried out by cribs, separated from each other about 30 feet, and bridged over. The first work built was so slight as to need frequent repairs, and the projected breakwater was never built.

In 1839 the piers were still unfinished, and upon an inspection by a Board of Engineer Officers it was concluded that "the wants of agriculture or commerce, or the business to be drawn to this place by them," were not sufficient to warrant further expenditure.

The work has been abandoned since that date.

PORTLAND HARBOR, LAKE ERIE, NEW YORK.

(Page 186.)

This harbor, situated 12 miles west of Dunkirk, was originally an open roadstead, the town being at the bottom of a small bay, fronting to the north. The works to protect the landing consisted of a pier, built by individual enterprise, extending into the lake from the eastern cape of the bay, and a pier from the western cape, extending 1,200 feet into the lake, built by the United States with the appropriations of 1836-'37 and '38.

The town having become a place of no commercial importance, the piers have been permitted to decay, there having been no appropriation for the work since 1838.

DUNKIRK HARBOR, NEW YORK.

(Page 179.)

The improvement of this harbor was begun in 1827. The entrance is through a depression in a solid rock reef, which extends entirely across the harbor. No change of depth was effected until 1877, when the depth was increased about 2 feet by blasting, making the entrance about 12 feet deep.

Expenditures upon this harbor have been mainly for the purpose of affording, by the construction of a breakwater, security for vessels seeking the harbor.

The commerce of Dunkirk has diminished of late years, and is now small.

In 1867, entrances and clearances, 679; tonnage, 452,925.

In 1881, entrances and clearances, 118; tonnage, 13,618.

July 1, 1882, amount available	\$3,665 90
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	3,611 81
	<hr/>
July 1, 1883, amount available.....	54 09

CATTARAUGUS CREEK, LAKE ERIE, NEW YORK.

(Page 178.)

Before any improvement was made here, the entrance to the creek was extremely shoal, shifting, and often impracticable. The appropriations of 1836, 1837, and 1838 were applied to the construction of parallel piers, by which the entrance was so much improved as to become

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accessible to steamers, and for a time the commerce of the place gradually increased in consequence.

The commerce of the creek has since declined, and the piers, having been neglected for want of appropriation since 1838, have gone to decay, but to what extent is not known.

BUFFALO HARBOR, NEW YORK.

(Page 176.)

First appropriation by Congress, 1826. Piers were built at the mouth of Buffalo Creek in 1820-'21 by private enterprise as an inducement to locate the terminus of the Erie Canal at this point.

The plan of improvement, as modified at various times, provided for the construction of a north and a south pier at the mouth of the creek; a masonry sea wall running south from the south pier, and a breakwater, a little less than half a mile distant from and in front of the Buffalo lighthouse, its long arm running nearly parallel with the general shore line of the lake.

The north and south piers were finished long ago, and the sea wall also. The depth of water between the piers at the entrance to the harbor was 10 feet in 1835, and is now 16 feet at low water. The breakwater at the end of the last working season had been completed to a length of 4,887 feet; its projected length is 7,600 feet, with an arm to extend from its extremity to the shore. The present sheltered harbor area is about 320 acres.

For the fiscal year ending June 30, 1882, the value of imports was \$5,473,864. Number of vessels cleared, 3,098; entered, 3,077. Chief articles of commerce, grain and lumber, with general merchandise.

July 1, 1882, amount available.....	\$63,923 94
Amount appropriated by act passed August 2, 1882.....	125,000 00
	<hr/>
	188,923 94
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$57,461 86
July 1, 1883, outstanding liabilities.....	10,066 10
	<hr/>
	67,527 96
July 1, 1883, amount available.....	121,395 98

BLACK ROCK HARBOR, NEW YORK.

(Page 176.)

The appropriations from 1829 to 1834, inclusive, were applied to the construction of a pier and mole inclosing the western entrance to the harbor. The lower portions of the pier, which forms the harbor, and a dike on Squaw Island had been constructed by the State of New York; the United States works were at the upper extremity of this pier and in continuation of it. The object of the mole was to arrest the sand from entering into the harbor.

The harbor being in fact a continuation of the Erie Canal, the United States works were at the time of the highest importance to commerce, as it was through the artificial harbor that the canal gained access to Lake Erie.

NIAGARA RIVER, AT TONAWANDA HARBOR, NEW YORK.

(Page 183.)

First appropriation, 1881. The improvement here has been the removal of three bars at the head and at the middle of Tonawanda Island and at the mouth of the creek; 13 feet water has been obtained at each of them, where before improvement there was but 11 feet.

Year ending June 30, 1882, value of imports, \$548,203; arrivals, 1,068; clearances, 1,063. Chief article of commerce, lumber.

Amount appropriated by act passed August 2, 1882.....	\$1,500 00
July 1, 1883, amount available.....	1,500 00

WILSON HARBOR, NEW YORK.

(Page 180.)

Two parallel piers were built by private enterprise in 1846, and the improvement continued from time to time by pier work and dredging, by which the original depth at entrance of 1 foot was increased to 6 feet.

The first appropriation by Congress was in 1875. The piers have been rebuilt and extended to 9 feet water in the lake, and there is now about that depth of entrance.

The harbor is of local importance only, the arrivals and departures averaging about one a week during the season of navigation.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year.....	2,054 94
	<hr/>
July 1, 1883, amount available.....	7,945 06

OLCOTT HARBOR (EIGHTEEN MILE CREEK), NEW YORK.

(Page 184.)

The original depth of the mouth at the creek was 1½ feet. In 1846 private parties had built a pier 250 feet into the lake. The present improvement was begun with the appropriation of 1867.

The piers have been carried out to 9 feet water in the lake, and the channel deepened to 10 feet for a width of 50 feet. In excavating this channel a bed of rock was encountered, which made the cost of this work greater than was anticipated.

The harbor is of local importance only. Chief articles of commerce, fruit, grain, and lumber.

OAK ORCHARD HARBOR, NEW YORK.

(Page 183.)

Appropriations were made for this harbor at intervals from 1836 to 1852. The present improvement dates from the appropriation of 1867. Originally, the mouth of the creek was closed by a bar upon which there was only from 2 to 4 feet water. The improvement consists of a breakwater built in 1836 and two parallel piers 200 feet apart, extending to 9 feet water in the lake. The channel between the piers is from 40 to 80 feet wide and 12 feet deep at low water, cut through a sandstone ledge. This is the only point between the mouth of Genesee River and Niagara River, a distance of 80 miles, suitable for a harbor of refuge, being about midway, with plenty of water inside.

The harbor is of local importance only, but by deepening the entrance to 12 feet might be made a good harbor of refuge.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount available.....	3,000 00

CHARLOTTE HARBOR, NEW YORK.

(Page 178.)

With appropriations from 1829 to 1835, the entrance to the harbor had been deepened by the construction of parallel piers from 4 to 15 feet. The subsequent appropriations made at intervals to date have been expended in the repairs and reconstruction of the piers; the depth at entrance has remained about the same.

This harbor is important as being the port of the city of Rochester, 7 miles distant. Value of imports and exports in 1882, \$1,083,000.

July 1, 1882, amount available	\$680 68
Amount appropriated by act passed August 2, 1882	35,000 00
	<hr/>
	35,680 68
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	3,628 86
	<hr/>
July 1, 1883, amount available	32,051 82

PULTNEYVILLE HARBOR, NEW YORK.

(Page 187.)

Previous to 1846, private parties had expended about \$30,000 at this place. The first appropriation by Congress was in 1870. The piers now extend to 10 feet water in the lake, and the channel between them, which has shoaled somewhat of late, has now 6 feet at extreme low water. The original depth was 2 feet.

The harbor is of local value only, the arrivals and departures averaging about one a week during the season of navigation.

Amount appropriated by act passed August 2, 1882	\$4,000 00
July 1, 1883, amount expended during fiscal year	451 41
	<hr/>
July 1, 1883, amount available.....	3,548 59

GREAT SODUS HARBOR, NEW YORK.

(Page 181.)

With appropriations made between the years 1829 and 1835, piers were built across the bar at the entrance to Sodus Bay, which increased the original depth of 8 feet to 9 feet. The subsequent appropriations made to date have been expended in repairs and reconstruction of the piers, and in dredging the channel between them. The depth at entrance is now 10½ feet at extreme low water.

This harbor is of importance as the terminus of the Lake Ontario Southern Railroad.

Amount appropriated by act passed August 2, 1882	\$25,000 00
July 1, 1883, amount expended during fiscal year	\$2,374 83
July 1, 1883, outstanding liabilities	1,072 63
	<hr/>
	3,447 46
	<hr/>
July 1, 1883, amount available	21,552 54

LITTLE SODUS HARBOR, NEW YORK.

(Page 182.)

Originally the entrance to the bay was through two narrow openings having a depth of 1½ feet. An appropriation made in 1852 was expended in pier work and dredging a channel of 6 feet at low water. The improvement was resumed with the appropriation of 1866. The present depth of entrance at extreme low water is 12 feet.

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This harbor is the terminus of the Southern Central Railroad, which, in connection with the Lehigh Valley Railroad, makes it a large coal-exporting port.

July 1, 1882, amount available	\$1,716 40
Amount appropriated by act passed August 2, 1882.....	25,000 00
	<hr/>
	26,716 40
July 1, 1883, amount expended during the fiscal year, exclusive of outstanding liabilities July 5, 1882	\$1,367 20
July 1, 1883, outstanding liabilities.....	3,854 45
	<hr/>
	5,221 65
July 1, 1883, amount available	21,494 75

OSWEGO HARBOR, NEW YORK.

(Page 184.)

First appropriation, 1827, at which time the mouth of the river was an open roadstead, affording no shelter from the winds of the lake, and the depth of water in channel $7\frac{1}{2}$ feet. An area at the mouth of the river was inclosed, and subsequent appropriations were applied to repairing and renewing the original structures and to dredging. The present improvement was begun with the appropriation of 1871, the plan being that of a west and east breakwater, with an opening of 350 feet between them for entrance into the harbor and river. The west breakwater, 6,025 feet long, is completed; the east one, which is designed to be 2,700 feet long, has been commenced. The river channel has been deepened to 15 feet at extreme low water. The present sheltered harbor area is about 150 acres.

Value of imports, fiscal year 1882, \$8,764,551; exports, \$1,075,184; vessels entered, 2,651; cleared, 2,673.

July 1, 1882, amount available	\$86 58
Amount appropriated by act passed August 2, 1882.....	80,000 00
	<hr/>
	80,086 58
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	15,225 01
	<hr/>
July 1, 1883, amount available	74,861 57

PORT ONTARIO HARBOR (MOUTH OF SALMON RIVER), NEW YORK.

(Page 186.)

Appropriations made between the years 1836 and 1844 were expended in the construction of piers at the mouth of the river.

These are now in ruins, the port not having developed, as was expected, into sufficient importance to warrant further improvement.

BLACK RIVER HARBOR, NEW YORK.

(Page 176.)

Appropriations between the years 1836 and 1844 were applied to the construction of piers, by which the original depth of 4 feet at entrance was increased to 9 feet.

The appropriation of 1873 was expended in dredging a channel through a bar at the outer end of the piers. No appropriation since that date. The piers are now in a dilapidated condition, and the depth of water at entrance has decreased to 4 feet at extreme low water.

SACKETT'S HARBOR, NEW YORK.

(Page 187.)

The appropriations of 1826 and 1828 were expended in dredging inside the harbor, to what depth is unknown.

The shoalness of the harbor restricts the lake commerce of the port to vessels drawing from 6 to 9 feet water. The appropriation of 1882 will be applied as far as it will admit to dredging in the harbor to a depth of 12 feet.

This is a terminus of the Utica and Black River Railroad. Value of imports and exports (fiscal year 1882), about \$400,000.

Amount appropriated by act passed August 2, 1882	\$7,000 00
July 1, 1883, amount expended during fiscal year.....	\$447 18
July 1, 1883, outstanding liabilities.....	1,702 00
	<hr/>
	2,149 18
July 1, 1883, amount available	4,850 82

OGDENSBURG HARBOR, NEW YORK.

(Page 187.)

First appropriation, 1867. All the dredging of the projected improvement of the harbor was completed in 1876, and the channels are now in good condition, having been deepened from 10 feet to 12 feet at extreme low water.

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 107

The commerce of the port has increased; the value of imports and exports in 1882 was \$2,307,668.

Amount appropriated by act passed August 2, 1882.....	\$10,000 00
July 1, 1883, amount expended during fiscal year.....	\$467 95
July 1, 1883, outstanding liabilities.....	2,122 56
	<hr/>
	2,590 51
July 1, 1883, amount available	<hr/>
	7,409 49

WADDINGTON HARBOR, NEW YORK.

(Page 188.)

First appropriation, 1873. This improvement, so far as it was originally contemplated, was completed in 1875. The depth of water through the bar at the head of Little River, the upper entrance to the harbor, was increased from 7 to 11 feet. The subsequent appropriations were applied to excavation in the lower entrance. This has been discontinued owing to the high cost of the blasting required and the little good to result from it.

The harbor is of local importance only. Value of imports and exports in 1882, \$76,800.

GRASS RIVER HARBOR, AT MASSENA, NEW YORK.

(Page —.)

No expenditure of the appropriation of 1882 has yet been made except for the necessary preparation for the work.

Amount appropriated by act passed August 2, 1882.....	\$3,000 00
July 1, 1883, amount expended during fiscal year.....	51 40
	<hr/>
July 1, 1883, amount available.....	2,948 60

PLATTSBURG HARBOR, NEW YORK.

(Page 185.)

Appropriations made between the years 1836 and 1844 were expended in the construction of a breakwater for the protection of vessels against the prevailing strongest winds, by which they are enabled to load and unload at all times. Subsequent appropriations have been applied to repairs of this work, to its extension, and to dredging in the sheltered harbor area.

This breakwater created and sustains the commerce of the place.

No statistics at hand.

July 1, 1882, amount available	\$1,629 00
July 1, 1883, amount expended during fiscal year.....	225 05
	<hr/>
July 1, 1883, amount available.....	1,403 95

WHITEHALL HARBOR, NEW YORK (IMPROVING ENTRANCE OF).

(Page 188.)

The appropriations of 1836, 1837, and 1838 were applied to "the excavation and removal of the sand and other alluvial deposits, which had so far accumulated below the town as to prevent steamers, and other vessels of larger classes navigating Lake Champlain, from approaching within less than half a mile of the proper landing places, to the great inconvenience of the traveling and commercial community."

The benefit to commerce was to afford (in 1840) "a channel quite up to the wharves and landing places of from 9 to 12 feet deep at low water."

TICONDEROGA RIVER, NEW YORK.

(Page 188.)

First appropriation, 1881. The object of the improvement now in progress is to open a channel 100 feet wide and 8 feet deep, from Lake Champlain to the town of Ticonderoga, the ruling depth by the river being but 2 feet.

This is a manufacturing and mining town of some importance. In 1881 the value of its annual commerce was stated to be \$1,156,223.

Amount appropriated by act passed August 2, 1882	\$5,000 00
July 1, 1883, amount expended during fiscal year	3,485 80
	<hr/>
July 1, 1883, amount available	1,514 20

BURLINGTON HARBOR, VERMONT.

(Page 210.)

The town is so situated that vessels lying at the wharves had originally no natural protection from westerly winds. The breakwater built with appropriations made from 1836 to 1844, was found, when work was to be resumed with the appropriation of 1866, to be insufficient, owing to the extension of the line of wharves by the growth of the place. The old breakwater was therefore, extended at each end. The appropriations from 1866 to date have been applied to this new work, and to occasional repairs.

108 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

The breakwater is essential to the commerce of the port.
No commercial statistics at hand.

July 1, 1882, amount available	\$2,803 26
Amount appropriated by act passed August 2, 1882	12,000 00
	<hr/>
	14,803 26
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	8,661 75
	<hr/>
July 1, 1883, amount available	6,141 51

SWANTON HARBOR, VERMONT.

(Page 211.)

The project for the improvement of this harbor was adopted in 1873, its object being to give protection to anticipated docks and wharves. The amount expended has resulted in the construction of a breakwater 259 feet long.

The docks and wharves have been located at some distance from the breakwater, thereby receiving very little or no protection from it. In view of this and the uncertainty of the future location of others now under consideration, further expenditures are withheld until their establishment shall give indications of requirements for further extension of the breakwater.

This is an important commercial center of the railway system of this part of the country.

July 1, 1882, amount available	\$1,909 06
Amount appropriated by act passed August 2, 1882	4,500 00
	<hr/>
	6,409 06
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	1,764 24
	<hr/>
July 1, 1883, amount available	4,644 82

OTTER CREEK, VERMONT.

(Page 211.)

First appropriation, 1872. The improvement comprises the removal of various snags, shoals, and other obstructions from the bed of the stream, and the deepening of the basin of Vergennes so as to afford a depth of 8 feet between that place and Lake Champlain.

The work is not complete, but has resulted so far in the improvement of that portion of the creek and basin most troublesome to navigators.

July 1, 1882, amount available	\$5,780 34
Amount appropriated by act passed August 2, 1882	2,000 00
	<hr/>
	7,780 34
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882	3,744 37
	<hr/>
July 1, 1883, amount available	4,035 97

CHANNEL BETWEEN NORTH HERO AND SOUTH HERO, LAKE CHAMPLAIN.

(Page 211.)

The appropriations of 1836 and 1837 were expended in dredging. This is the main water communication between the commercial channel on the western and Swanton Harbor and Saint Albans Bay on the eastern side of the lake, and is used by steam and sail vessels engaged in the general and local commerce of the lake. The entrance and outlet of this channel has since diminished in width and is obstructed by dangerous rocks. It should be widened and the rocks removed.

OAKLAND HARBOR, CALIFORNIA.

(Page 120.)

First appropriation, 1874. At the beginning of the improvement the depth on the bar at the entrance was at low stage 3 feet, and at high stage 9 feet; average draught of vessels, about 5 feet. The present depths are 14 feet at low, and 20 feet at high water; average draught of vessels using the channel, 12 feet.

The benefit to commerce may be inferred by the following:

Business of the year 1874, by steamers, no passengers	} 154,300 tons freight.
Business of the year 1874, by sail, no passengers	
Business of the year 1882, by steamers	858,352 passengers. 1,051,788 tons freight.
Business of the year 1882, by sail	173,448 tons freight.
	<hr/>
Total passengers	858,352 freight 1,225,236 tons.
July 1, 1882, amount available	\$63,389 92
Amount appropriated by act passed August 2, 1882	200,000 00
	<hr/>
	263,389 92
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$69,232 06
July 1, 1883, outstanding liabilities	6,074 18
	<hr/>
	75,306 24
July 1, 1883, amount available	188,083 68

WILMINGTON HARBOR, CALIFORNIA.

(Page 121.)

First appropriation, 1871. Before improvement there was a variable depth of 1 to 2 feet at low water on the bar at the entrance. All freight and passengers had to be lightered for several miles.

The present depth varies from 8 to 10 feet at low water and 14 to 16 feet at high water. Vessels drawing 14 feet now enter and deliver freight at the wharves. Deep-draught ships are now obliged, as formerly, to lie outside and discharge by lighters.

Trade before improvement, 1871: exports, 9,575 tons; imports, 25,313 tons. Imports, lumber, 10,938,336 tons.

In 1881, exports, 23,506 tons; imports, 90,340 tons. Imports, lumber, 41,217,428 feet.

Direct benefit to commerce, saving in cost of lighterage.

July 1, 1882, amount available.....	\$6 24
Amount appropriated by act passed August 2, 1882	100,000 00
	<hr/> 100,006 24
July 1, 1883, amount, expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$63,091 09
July 1, 1883, outstanding liabilities.....	6,998 81
	<hr/> 70,089 90
July 1, 1883, amount available.....	29,916 34

PETALUMA CREEK, CALIFORNIA.

(Page 120.)

First appropriation, 1880. But little progress has been made upon this improvement, the appropriation of 1881 having been too small to justify its application until a larger sum became available. With the addition of the appropriation of 1882 work has been resumed. Two cut-offs were made in the stream with the first appropriation, which considerably shortened the trips of the numerous vessels that ply between Petaluma and San Francisco. The deepening of the channel cannot fail to prove of additional advantage.

A considerable area of country, affording employment to a large fleet of schooners and to a line of steamers, depends in a great measure for its prosperity upon this navigation.

July 1, 1882, amount available.....	\$8,426 14
Amount appropriated by act passed August 2, 1882.....	14,000 00
	<hr/> 22,426 14
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$4,963 90
July 1, 1883, outstanding liabilities	2,433 70
	<hr/> 7,396 60
July 1, 1883, amount available	15,029 54

SACRAMENTO AND FEATHER RIVERS, CALIFORNIA.

(Page 120.)

First appropriation, 1875. The improvement of these rivers has consisted in the construction of wing-dams, to give greater depth in shallow places, and in the removal of snags from the channel and impending trees from the banks.

The Upper Sacramento changes its bed in many places with great facility, and the clearance of snags is indispensable to its navigation. But for these operations a large portion of the river, forming an outlet for a large agricultural country, would have become unnavigable at ordinary stages, and the expenditure has in this way afforded benefit to navigation.

July 1, 1882, amount available	\$14,885 53
Amount appropriated by act passed August 2, 1882	250,000 00
	<hr/> 264,885 53
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882.....	\$28,220 73
July 1, 1883, outstanding liabilities	6,193 00
	<hr/> 34,413 73
July 1, 1883, amount available.....	230,466 80

SAN JOAQUIN RIVER, CALIFORNIA.

(Page 121.)

First appropriation, 1876. Two permanent improvements have been made in the channel of the river by the excavation of canals 100 feet wide and 10 feet deep to straighten an unusual abruptness of the bends of the river that made the passage difficult for the daily steamers and delayed sailing vessels.

Channels have been dredged to great advantage in Stockton and Mormon sloughs, permitting full loads to be carried in the low stage of water. These improvements have encouraged the establishment of warehouses and a large grist-mill at Stockton, which is a center of wheat trade.

The construction of brush dams in the bed of the upper river and the removal of snags have

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facilitated navigation, and the improvements named have materially increased the capacity of the river for commerce, and are highly appreciated by all interested.

July 1, 1882, amount available	\$5,078 95
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
July 1, 1882	45,078 95
July 1, 1883, amount expended during fiscal year exclusive of outstanding liabilities	15,581 21
	<hr/>
July 1, 1883, amount available	29,497 74

HUMBOLDT HARBOR AND BAY, CALIFORNIA.

(Page 120.)

First appropriation, 1881. Operations in this harbor have been limited to dredging the ship-channel at two points, and in surveys with a view to the future improvement of the entrance. Additional dredging at these and two other points is about to be commenced.

The dredging has been a convenience to vessels engaged in the commerce of this port, which is the most important in California north of San Francisco, and whose commerce is steadily increasing, and has lessened delays in receipt and discharge of cargoes, and in some cases has dispensed with lighterage.

July 1, 1882, amount available	\$130 03
Amount appropriated by act passed August 2, 1882	40,000 00
	<hr/>
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$20,238 44
July 1, 1883, outstanding liabilities	1,897 60
	<hr/>
	22,136 04
	<hr/>
July 1, 1883, amount available	17,993 99

SAN FRANCISCO HARBOR, CALIFORNIA.

(Page 121.)

Allotments, 1868 and 1869; appropriations, 1872 and 1874. Expenditures made at this harbor have been applied to the improvement of navigable channels by the removal of dangers.

Blossom and Rincon rocks, isolated peaks in navigable channels in the harbor, with 6 and 8 feet over them at low water, were removed to a depth of 24 feet at mean low water. Noonday Rock, situated at sea, about 30 miles off the heads, was removed to the depth of 47 feet. The wreck of the ship Patrician on the bar at the entrance to the harbor was also removed.

These operations relieved commerce of danger, but did not affect the navigable capacity of the channels.

SAN DIEGO HARBOR, CALIFORNIA.

(Page 121.)

First appropriation, 1852. To prevent injury to the harbor by the deposit of sand and soil into the bay during times of flood, a levee was built across the river in 1853-'54, to divert it into False Bay.

This stood but a few years, and was eventually carried away by an unusual freshet.

The same object has been successfully accomplished with the appropriation of 1875, and the expenditure has resulted in benefiting commerce to the extent of preserving the harbor permanently from injury by the river.

July 1, 1882, amount available	\$827 50
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	68 00
	<hr/>
July 1, 1883, amount available	759 50

HARBOR OF REFUGE ON THE PACIFIC COAST.

(Page 121.)

Only so much of the appropriation of \$150,000 of March 3, 1879, has been expended as was required to meet the cost of an examination of several harbors on the Pacific coast by a Board of Engineer officers. The balance is held to await the future action of Congress, it having been found that the amount available could not produce beneficial results.

According to the estimates of the Board an ultimate expenditure of about \$8,000,000 may be involved in the complete establishment of the harbor in question.

The majority of the Board recommends Port Orford as the most suitable point for the proposed work.

LOWER WILLAMETTE AND COLUMBIA RIVERS, FROM PORTLAND, OREGON, TO THE SEA.

(Page 200.)

First appropriation, 1866. Before improvement the natural depth on the shoalest bar below Portland was about 9 feet at low water, and on six other bars 10½ to 15 feet.

Since the work has been in progress the ruling depths have generally been kept at 15, then 17 and 19 feet low water, with greater depths on part of the bars.

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS. 111

The benefit to commerce has been the maintenance of a ship-channel from Astoria, near the mouth of Columbia River, to Portland, 100 miles, with safer and easier navigation.

Before improvement, small steamships made tri-monthly trips from San Francisco to Portland, at present large steamers make two trips per week, with occasional freight steamers, and from Puget Sound regular colliers. Two steamers have lately arrived from China.

For year ending May 31, 1882, value of imports, \$558,000; exports, \$6,614,243.

July 1, 1882, amount available.....	\$909 16
Amount appropriated by act passed August 2, 1882.....	100,000 00
	<hr/>
	100,909 16
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	88,741 31
	<hr/>
July 1, 1883, amount available.....	12,167 85

UPPER WILLAMETTE RIVER, OREGON.

(Page 199.)

First appropriation, 1871. Previous to 1875 there was no navigation above the mouth of the Yamhill (40 miles from Portland) during low water. Since 1877 there has been no time when it was not possible to reach Corvallis, 114 miles.

Before the completion of the main lines of the valley railroads, the river was the only means of transportation for an area of about 3,000 square miles of settled and cultivated agricultural country; the opening of these roads has diminished the river transportation.

July 1, 1882, amount available.....	\$1,139 47
Amount appropriated by act passed August 2, 1882.....	5,000 00
	<hr/>
	6,139 47
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$5,925 90
July 1, 1883, outstanding liabilities.....	17 50
	<hr/>
	5,943 40
July 1, 1883, amount available.....	196 07

UPPER COLUMBIA AND SNAKE RIVERS, OREGON AND WASHINGTON TERRITORY.

(Page 227.)

First appropriation, 1872. The natural channel through the rock rapids was, before improvement, narrow, tortuous, and rapid, with a depth of 2 to 4 feet at low stage. Navigation was difficult and dangerous, and limited to periods of favorable stage. Improvements have been made at thirteen localities, by which navigation is easier and its period prolonged, and depths increased to 4½ and 5½ feet. The carrying capacity of boats using the river has increased 25 to 50 per cent.

The productions of the Upper Columbia country are rapidly increasing; for the year ending May 30, 1882, their value was computed to be about \$6,000,000.

July 1, 1882, amount available.....	\$128 98
Amount appropriated by act passed August 2, 1882.....	6,000 00
	<hr/>
	6,128 98
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities	
July 1, 1882.....	988 69
	<hr/>
July 1, 1883, amount available.....	5,140 29

CANAL, CASCADES OF COLUMBIA RIVER, OREGON.

(Page 226.)

First appropriation, 1877. Improvement in progress, and consists of open river work over a reach of about 4 miles, from head of present navigation to the foot of projected canal. The river part is about one-half completed, the canal part about one-fourth.

The completion will give a continuous navigation of 8 feet least depth of channel from the head of ship navigation as far up as The Dalles, 45 miles, which is the border of the productive and extensive Upper Columbia region, from which to The Dalles, railroad construction is comparatively easy, whereas, below The Dalles, it is difficult, and its maintenance would be expensive.

No material benefit to commerce can be expected until the improvement is completed.

July 1, 1882, amount available.....	\$517 60
Amount appropriated by act passed August 2, 1882.....	265,000 00
	<hr/>
	265,517 60
July 1, 1883, amount expended during fiscal year, exclusive of outstanding	
liabilities July 1, 1882.....	\$179,713 78
July 1, 1883, outstanding liabilities.....	6,519 75
	<hr/>
	186,233 53
July 1, 1883, amount available.....	79,284 07

112 APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

ENTRANCE TO COOS BAY, OREGON.

(Page 199.)

First appropriation, 1879. Improvement incomplete; its object is to open and maintain a deeper and more direct channel across the sea-bar by jetty construction.

The natural channel was shifting, usually tortuous, and with not more than 9 to 12 feet at mean low water.

The benefit to commerce is that an unusual draught of 14½ feet has been carried over the bar, and that night crossings of the bar, not previously attempted, have been made. The improvement furnishes encouragement to large lumber and coal interests of the region.

July 1, 1882, amount available	\$5 58
Amount appropriated by act passed August 2, 1882.....	30,000 00
	<hr/> 30,005 58
July 1, 1883, amount expended during fiscal year, exclusive of outstand- ing liabilities July 1, 1882.....	\$25,240 26
July 1, 1883, outstanding liabilities	1,952 95
	<hr/> 27,193 21
July 1, 1883, amount available	2,812 37

LOWER CLEARWATER RIVER, IDAHO.

(Page 135.)

First appropriation, 1879. The improvement has for its object to open a channel through rock reefs and cobblestone bars for rafts and small river boats 60 feet wide, and 4 feet deep at low stage, for a distance of 40 miles. The natural channel was impracticable for boats and difficult for rafts.

The partial improvement so far made has greatly benefited a timber interest. Its completion will make the Lower Clearwater an actual part of the Upper Columbia River highway.

Amount appropriated by act passed August 2, 1882.....	\$5,000 00
July 1, 1883, amount expended during fiscal year.....	604 77
	<hr/> 4,395 23

ENTRANCE TO YAQUINA BAY, OREGON.

(Page 200.)

First appropriation, 1880. The projected improvement is to afford a permanent central channel over the bar, with a depth of not less than 12 feet at mean low tide. Of the three natural shifting channels, the best one had a depth of from 7 to 9 feet; the two others are obstructed by rocks. The work has not advanced sufficiently to benefit commerce. Under the expectation of its completion, a railroad has been projected and partially constructed from a point in the Willamette Valley to Yaquina Bay.

July 1, 1882, amount available	\$7 24
Amount appropriated by act passed August 2, 1882	60,000 00
	<hr/> 60,007 24
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$36,425 29
July 1, 1883, outstanding liabilities	4,556 84
	<hr/> 40,982 13
July 1, 1883, amount available	19,025 11

MOUTH OF COQUILLE RIVER, OREGON.

(Page 199.)

First appropriation, 1880. By the construction, in part, of a low jetty the expenditure has resulted in a marked benefit to the entrance channel. This was naturally tortuous, obstructed by rocks, somewhat shifting, and rarely carried more than 3 feet at low water. The incomplete jetty has caused this channel to fill completely above high tide, and has cut out a straight channel, as intended, entirely free from rocks, and with an additional depth of 2 to 3 feet. The improvement, so far, is eminently successful.

There is a brisk ship-building industry on the river. The exports consist of lumber, manufactured wooden articles, produce, salmon, hides, and skins. The valley is exceedingly fertile.

July 1, 1882, amount available	\$3 31
Amount appropriated by act passed August 2, 1882	10,000 00
	<hr/> 10,003 31
July 1, 1883, amount expended during fiscal year, exclusive of outstanding liabilities July 1, 1882	\$9,586 08
July 1, 1883, outstanding liabilities	320 50
	<hr/> 9,906 58
July 1, 1883, amount available	96 73

COWLITZ RIVER, WASHINGTON TERRITORY.

(Page 216.)

First appropriation, 1880. The improvement consists in the removal of drift, snags, and bars, to give an easy and safe light-draught navigation at all stages as far as Cowlitz Landing, 40 miles from the river mouth.

The work accomplished has facilitated transportation and rafting, and has promoted rapid settlement of the fertile and productive valley of the river. All the industries of the valley have more than doubled since 1879, and the river trade is steadily increasing.

Excepting only the Willamette and Snake rivers, the Cowlitz is the most important tributary of the Columbia.

Amount appropriated by act passed August 2, 1882	\$1,000 00
July 1, 1883, amount expended during fiscal year	927 27
July 1, 1883, amount available	72 73

SKAGIT, STEILAQUAMISH, NOOTSACK, SNOHOMISH, AND SNOQUALMIE RIVERS, WASHINGTON TERRITORY.

(Page 216.)

First appropriation, 1880, for the Skagit was expended in a partial improvement of that stream by removing snags and jams that rendered it at times impassable. The appropriation of 1882 is being applied to the construction of a snag-boat for use on all these rivers; the aggregate length on which navigation can be readily improved and extended is about 250 miles. In the absence of wagon roads they form the only routes of travel and transportation.

The population has doubled since 1880, and the discovery of coal and iron near the Skagit has given impulse to important enterprises which depend principally on a free river for their success.

Amount appropriated by act passed August 2, 1882	\$20,000 00
July 1, 1883, amount expended during fiscal year	\$1,015 67
July 1, 1883, outstanding liabilities	48 00
	1,063 67
July 1, 1883, amount available	18,936 33

CHEHALIS RIVER, OREGON.

(Page —.)

First appropriation, 1882, of which no expenditure has yet been made, except for survey. The present wants of commerce can be met by the removal of rafts and the most troublesome snags.

Amount appropriated by act passed August 2, 1882	\$3,000 00
July 1, 1883, amount expended during fiscal year	95 55
July 1, 1883, amount available	2,904 45

UMPQUA RIVER, OREGON.

(Page 199.)

First appropriation, 1871. The expenditure on this river was for rock removal from Scottsburg, the head of existing navigation, down to Roseburg, on the South Fork.

No benefit to commerce nor increase of navigable capacity resulted.

The Umpqua above Scottsburg is not navigable water as defined by the Supreme Court.

RIVERS AND HARBORS.

Statement of appropriations and expenditures for rivers and harbors from March 4, 1789, to June 30, 1882.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
ALABAMA.										
<i>Alabama River.</i>										
For improving Alabama River, Alabama.....	June 18, 1878	20	153	1	\$25,000 00	1879	\$25,000 00			\$25,000 00
	Mar. 3, 1879	20	365	1	30,000 00	1880	20,000 00			20,000 00
	June 14, 1880	21	186	1	25,000 00	1881	20,000 00			20,000 00
	Mar. 3, 1881	21	476	1	20,000 00	1882	30,000 00			30,000 00
Total					100,000 00		95,000 00			95,000 00
Balance									\$5,000 00	
<i>Chattahoochie River.</i>										
Alabama, Florida, and Georgia. See "Miscellaneous," post.										
<i>Choctawhatchie River.</i>										
Alabama and Florida. See "Miscellaneous," post.										
<i>Cosa River.</i>										
Alabama, Florida, and Georgia. See "Miscellaneous," post.										
<i>Escambia River.</i>										
Alabama and Florida. See "Miscellaneous," post.										
<i>Mobile Harbor.</i>										
For the purpose of removing the obstructions and deepening the harbor of Mobile, Ala.	May 20, 1826	4	176	1	10,000 00	1827	5,605 78			5,605 78
	Mar. 2, 1829	4	348	1	20,000 00	1828	1,523 00		2,871 22	1,523 00
For completing improvements in the harbor of Mobile	Mar. 2, 1829	4	349	1	2,871 22	1830	6,900 00			2,550 00
For removing obstructions in the harbor of Mobile						1831	13,421 22			6,900 00
For improving the harbor at Mobile in removing the bar at the entrance of the harbor called Choctaw Pass	June 28, 1834	4	703		10,000 00	1834		\$474 55		12,946 67
For completing the improvement at the harbor of Mobile in removing the bar at the entrance of the harbor called the Choctaw Pass	Mar. 3, 1835	4	754		17,997 60	1835	28,472 15			
For improving the harbor of Mobile by removing the bar of the Choctaw Pass and Dog River Bar						1836	566 71			28,472 15
For continuing the improvements at Dog River Bar and Choctaw Pass, in Mobile Harbor	Mar. 3, 1837	5	188	1	50,000 00	1837	500 00			500 00
	July 7, 1838	5	270	1	50,000 00	1838	5,000 00			5,000 00
						1839	30,037 00			30,037 00
						1840	57,329 00		7,134 00	57,329 00
	Aug. 30, 1852	10	58		50,000 00	1853	1,296 43			1,296 43
						1854	32,239 95			32,239 95
						1855	16,463 62			16,408 77
						1856	12 50			
						1858	54 85			
						1859				
For the improvement of the harbor of Mobile at Dog River Bar and Choctaw Pass										
The act of March 3, 1857, provides, "That the Secretary of the Treasury be, and he hereby is, directed, out of any money in the Treasury not otherwise appropriated, to pay to Collier H. Minge, Philip T. Ellicott, and Lucretia A. Brodie, administratrix of Charles Brodie, the sum of \$6,919.38, to be divided equally among them; and to Collier H. Minge and Philip T. Ellicott the sum of \$13,913.62, to be equally divided among them. The said sums being in full for the amount due on a contract dated December 5, 1836, for excavating the channel on Dog River Bar, in the bay of Mobile."	Mar. 3, 1857	11	520		6,919 38					
For improvement of harbor and bay of Mobile	Mar. 3, 1857	11	520		13,913 62	1857	20,833 00			20,833 00
For improvement of Mobile Harbor	July 11, 1870	16	226	1	50,000 00					
	Mar. 3, 1871	16	541	1	50,000 00	1871	35,031 45	10,931 45		24,100 00

[illegible]

<i>Fourche Le Fevre River.</i>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>White and Saint Francis Rivers.</i>	Mar. 3, 1873	17	562	1	\$50,000 00	1873	\$9,000 00	.....	.....	\$9,000 00
	June 18, 1878	20	153	1	.....	1874	41,000 00	.....	.....	41,000 00
For the improvement of the White and Saint Francis Rivers.	Mar. 3, 1879	20	371	1	40,000 00	1879	40,000 00	.....	.....	40,000 00
	June 14, 1880	21	187	1	12,000 00	1880	12,000 00	.....	.....	12,000 00
	Mar. 3, 1881	21	477	1	12,000 00	1881	12,000 00	.....	.....	12,000 00
	Mar. 3, 1881	21	477	1	8,000 00	1882	8,000 00	.....	.....	8,000 00
Total					122,000 00	.....	122,000 00	.....	.....	122,000 00
<i>CALIFORNIA.</i>										
<i>Humboldt Harbor.</i>										
For improving Humboldt Harbor and Bay, California.....	Mar. 3, 1881	21	472	1	40,000 00	1882	40,000 00	.....	.....	40,000 00
<i>Oakland Harbor.</i>										
For the improvement of Oakland Harbor, California	June 23, 1874	18	242	1	100,000 00	1875	52,000 00	.....	.....	52,000 00
	Mar. 3, 1875	18	461	1	100,000 00	1876	110,000 00	.....	.....	110,000 00
For the improvement of Oakland Harbor, to be applied to finishing training-walls and dredging between them	Aug. 14, 1876	19	135	1	75,000 00	1877	53,000 00	.....	.....	53,000 00
For improving Oakland Harbor, but this sum, and any sum unexpended and reappropriated, shall not be available until the right of the United States to the bed of the estuary and training-walls of this work is secured, free of expense to the government, in a manner satisfactory to the Secretary of War.....	June 18, 1878	20	155	1	80,000 00	1879	5,000 00	.....	.....	5,000 00
	Mar. 3, 1879	20	369	1	60,000 00	1880	2,000 00	.....	.....	2,000 00
	June 14, 1880	21	192	1	60,000 00	1881	55,000 00	.....	.....	55,000 00
	Mar. 3, 1881	21	469	1	60,000 00	1882	155,000 00	.....	.....	155,000 00
Total					535,000 00	.....	473,000 00	.....	.....	473,000 00
Balance .....					.....	.....	.....	.....	\$62,000 00	.....
<i>Petalumas Creek.</i>										
For improving Petalumas Creek, California.....	June 14, 1880	21	191	1	8,000 00	1881	8,000 00	.....	.....	8,000 00
	Mar. 3, 1881	21	479	1	8,000 00	.....	.....	.....	.....	.....
Total					16,000 00	.....	8,000 00	.....	.....	8,000 00
Balance .....					.....	.....	.....	.....	8,000 00	.....
<i>Sacramento River.</i>										
For improving Sacramento River, California, continuing improvement.....	June 18, 1878	20	157	1	15,000 00	1879	15,000 00	.....	.....	15,000 00
	Mar. 3, 1879	20	370	1	20,000 00	1880	12,000 00	.....	.....	12,000 00
	June 14, 1880	21	189	1	45,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1881	21	479	1	60,000 00	1881	63,000 00	.....	.....	63,000 00
	Mar. 3, 1881	21	479	1	.....	1882	45,000 00	.....	.....	45,000 00
Total					140,000 00	.....	135,000 00	.....	.....	135,000 00
Balance .....					.....	.....	.....	.....	5,000 00	.....
<i>Sacramento and Feather Rivers.</i>										
For the improvement of the Sacramento and Feather Rivers, California	Mar. 3, 1875	18	461	1	15,000 00	1876	15,000 00	.....	.....	15,000 00

<i>San Diego River.</i> For building a levee across the mouth of the San Diego River, in the State of California, to turn it into its former channel into False Bay, to be expended under the direction of the Secretary of War.....	Aug. 30, 1852	10	60	1	30,000 00	1853	8,500 00	1854	21,500 00			8,500 00	
	Mar. 3, 1875	18	461	1	80,000 00	1875	3,000 00	1876	13,000 00			3,000 00	
	Mar. 3, 1879	20	370	1	1,000 00	1877	64,000 00	1878	64,000 00			13,000 00	
						1880	1,000 00					64,000 00	
	Total.....				111,000 00		111,000 00					1,000 00	
<i>San Francisco Harbor.</i> For the removal of Rincon rock, in the harbor of San Francisco, Cal.....	June 10, 1872	17	375	1	50,000 00	1873	1,500 00					111,000 00	
	June 23, 1874	18	242	1	25,000 00	1874	43,000 00					1,500 00	
						1875	29,000 00					43,000 00	
						1876		25				26,671 43	
						1881		2,328 32					
Total.....					75,000 00		73,500 00	2,328 57				71,171 43	
Balance.....									3,828 57				
<i>San Joaquin River.</i> For the improvement of San Joaquin River, California.....	Aug. 14, 1876	19	135	1	20,000 00	1877	2,000 00					2,000 00	
	June 14, 1880	21	191	1	20,000 00	1878	18,000 00					18,000 00	
						1881	20,000 00					20,000 00	
	Mar. 3, 1881	21	479	1	40,000 00	1882	35,000 00					35,000 00	
	Total.....				80,000 00		75,000 00					75,000 00	
Balance.....									5,000 00				
<i>Harbor of refuge, between the Straits of Fuca and San Francisco.</i> The act of March 3, 1879, appropriates \$150,000, to be expended by the Secretary of War in the commencement of the construction of a breakwater and harbor of refuge at such point on the Pacific Ocean between the Straits of Fuca and San Francisco, Cal., as may, in the opinion of a majority of the Board of United States Engineers for the Pacific Coast, be most suitable, the interests of commerce, local and general, being considered.....	Mar. 3, 1879	20	372	1	150,000 00	1880	10,257 11					10,257 11	
									189,742 89				
	Balance.....												
	Mar. 3, 1871	16	541	1	200,000 00	1871	1,000 00					1,000 00	
	June 10, 1872	17	375	1	75,000 00	1872	145,000 00					145,000 00	
<i>Wilmington Harbor.</i> For construction of breakwater at Wilmington Harbor, California.....	Mar. 3, 1873	17	565	1	150,000 00	1873	149,000 00					149,000 00	
	Mar. 3, 1875	18	461	1	30,000 00	1874	58,000 00					58,000 00	
						1875	25,000 00					25,000 00	
						1876	40,000 00					40,000 00	
	June 18, 1878	20	157	1	20,000 00	1877	37,000 00					37,000 00	
<i>For the improvement of the breakwater at Wilmington.....</i>	Mar. 3, 1879	20	370	1	12,000 00	1880	20,000 00					20,000 00	
	June 14, 1880	21	189	1	35,000 00		12,000 00					12,000 00	
	Mar. 3, 1881	21	472	1	33,000 00	1881	41,000 00					41,000 00	
						1882	27,000 00					27,000 00	
	Total.....				555,000 00		555,000 00					555,000 00	
<i>Bridgeport Harbor.</i> For deepening the channel leading into Bridgeport Harbor, Connecticut.....	July 4, 1836	5	129	1	10,000 00	1837	10,000 00					9,956 40	
						1840		43 60				43 60	

CONNECTICUT.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Bridgeport Harbor—Continued.										
For the further improvement of the harbor at Bridgeport, Conn.	Aug. 30, 1852	10	60	.....	\$10,000 00	1853	\$500 00	.....	.....	\$500 00
					.....	1854	9,500 00	.....	.....	9,400 40
					.....	1855	.....	\$99 60	\$99 60	.....
	Mar. 3, 1871	16	541	1	20,000 00	1871	3,000 00	.....	.....	3,000 00
					.....	1872	17,000 00	.....	.....	17,000 00
	June 10, 1872	17	374	1	40,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	565	1	30,000 00	1873	40,000 00	.....	.....	40,000 00
					.....	1874	30,000 00	.....	.....	30,000 00
	June 23, 1874	18	241	1	20,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1875	18	460	1	15,000 00	1875	20,000 00	.....	.....	20,000 00
					.....	1876	15,000 00	.....	.....	15,000 00
	Aug. 14, 1876	19	135	1	10,000 00	1877	4,000 00	.....	.....	4,000 00
					.....	1878	6,000 00	.....	.....	6,000 00
For the improvement of the harbor at Bridgeport, of which sum not less than one-half shall be expended between the lower bridge and the horse-railroad bridge.	June 18, 1878	20	158	1	10,000 00	1879	10,000 00	.....	.....	10,000 00
	Mar. 3, 1879	20	363	1	10,000 00	1880	10,000 00	.....	.....	10,000 00
	June 14, 1880	21	180	1	10,000 00	1881	10,000 00	.....	.....	10,000 00
	Mar. 3, 1881	21	469	1	10,000 00	1882	10,000 00	.....	.....	10,000 00
Total					195,000 00	.....	195,000 00	143 20	143 20	194,856 80
Cedar Point Beach.										
For further securing the beach at Cedar Point.	July 4, 1836	5	129	1	1,000 00	1837	840 00	.....	.....	840 00
					.....	1838	160 00	.....	.....	160 00
Total					1,000 00	.....	1,000 00	.....	.....	1,000 00
Connecticut River.										
For making a survey of the harbor of Westbrook, near the mouth of Connecticut River, with a view to the improvement of the said harbor, and for ascertaining the cost of such improvement.	Mar. 2, 1829	4	347	2	130 00	1829	130 00	.....	.....	60 94
					.....	1833	.....	69 06	69 06	.....
For improvement of Connecticut River.	July 11, 1870	16	225	1	40,000 00	.....	.....	.....	.....	.....
For improvement of Connecticut River above Hartford and below Holyoke.	Mar. 3, 1871	16	540	1	20,000 00	1871	25,000 00	.....	.....	25,000 00
	Mar. 3, 1871	16	541	1	35,000 00	1872	60,000 00	.....	.....	60,000 00
For improvement of Connecticut River below Hartford.	June 10, 1872	17	374	1	25,000 00	.....	.....	.....	.....	.....
For the improvement of the Connecticut River on or above Enfield Falls and below Holyoke.	June 10, 1872	17	374	1	40,000 00	.....	.....	.....	.....	.....
For the improvement of the Connecticut River below Hartford, including Saybrook Bar, at the mouth of the river.	Mar. 3, 1873	17	564	1	20,000 00	.....	.....	.....	.....	.....
For the improvement of Connecticut River below Hartford.	Mar. 3, 1873	17	565	1	20,000 00	1873	20,000 00	.....	.....	20,000 00
For the improvement of Connecticut River above Hartford and below Enfield Falls.	June 23, 1874	18	241	1	20,000 00	1874	73,000 00	.....	.....	73,000 00
	Mar. 3, 1875	18	460	1	20,000 00	1875	20,000 00	.....	.....	20,000 00
For continuing the improvement of the Connecticut River below Hartford.	Aug. 14, 1876	19	133	1	20,000 00	1876	20,000 00	.....	.....	20,000 00
					.....	1877	10,000 00	.....	.....	10,000 00
					.....	1878	10,000 00	.....	.....	10,000 00
For improving Connecticut River below Hartford, \$30,000; of which sum \$5,000 shall be used for dredging the river between Hartford and Middletown; and \$2,000 for improving the mouth of Salmon River in the town of East Haddam.	June 18, 1878	20	159	1	30,000 00	1879	37,000 00	.....	.....	37,000 00

	Mar. 3, 1879	20	363	1	10,000 00	1880	10,000 00			
For improving Connecticut River below Hartford, including dredging between Hartford and Middletown.....	June 14, 1880	21	184	1	10,000 00					
For improving Connecticut River between Hartford and Holyoke.....	June 14, 1880	21	192	1	15,000 00	1881	20,000 00			20,000 00
For improving Connecticut River below Hartford, of which \$10,000 shall be used to continue the work in progress on the bar at the mouth of the river and \$3,000 in dredging the channel below Rocky Hill.....	Mar. 3, 1-81	21	473	1	30,000 00	1882	30,000 00			30,000 00
Total.....					355,130 00		335,130 00	69 06	69 06	335,060 94
Balance.....										20,000 00
<i>Housatonic River.</i>										
Mar. 3, 1871	16	541	1	15,000 00	1871	1,000 00	1,000 00			1,000 00
June 10, 1872	17	374	1	15,000 00	1872	14,000 00	14,000 00			14,000 00
Mar. 3, 1873	17	565	1	10,000 00	1873	15,000 00	15,000 00			15,000 00
June 23, 1874	18	241	1	10,000 00	1874	10,000 00	10,000 00			10,000 00
Mar. 3, 1875	18	460	1	5,000 00	1875	10,000 00	10,000 00			10,000 00
					1876	2,000 00	2,000 00			2,000 00
					1877	3,000 00	3,000 00			3,000 00
June 18, 1878	20	159	1	5,000 00	1879	5,000 00	5,000 00			5,000 00
June 14, 1880	21	184	1	2,000 00	1881	2,000 00	2,000 00			2,000 00
Mar. 3, 1881	21	473	1	2,000 00	1882	2,000 00	2,000 00			2,000 00
Total.....					64,000 00		64,000 00			64,000 00
<i>Little Narragansett Bay.</i>										
Connecticut and Rhode Island. See "Miscellaneous," post.										
<i>Milford Harbor.</i>										
June 23, 1874	18	241	1	5,000 00	1875	5,000 00	5,000 00			5,000 00
Mar. 3, 1875	18	460	1	13,000 00	1876	8,000 00	8,000 00			8,000 00
					1877	5,000 00	5,000 00			5,000 00
June 18, 1878	20	159	1	10,000 00	1879	10,000 00	10,000 00			10,000 00
June 14, 1880	21	180	1	5,000 00	1881	5,000 00	5,000 00			5,000 00
Total.....					33,000 00		33,000 00			33,000 00
<i>Mill River.</i>										
For improving the navigation of Mill River, Connecticut, by removing obstructions in the said river, and constructing such works as will prevent the sand from filling up the channel of the same.....	Mar. 2, 1829	4	347	1	6,097 00	1829	3,941 00			3,941 00
For completing the breakwater and dyke and deepening the channel in the harbor of Mill River.....	July 31, 1832	4	552	1	4,490 43	1832	3,380 00			3,380 00
Total.....					10,587 43		1,110 43			1,110 43
							10,587 43			10,587 43
<i>New Haven Breakwater.</i>										
For construction of breakwater at New Haven, Conn.....	Mar. 3, 1879	20	371	1	30,000 00	1880	5,000 00			5,000 00
For construction of breakwater, continuing operations.....	June 14, 1880	21	184	1	30,000 00	1881	55,000 00			55,000 00
Total.....	Mar. 3, 1881	21	469	1	60,000 00	1882	60,000 00			60,000 00
					120,000 00		120,000 00			120,000 00
<i>New Haven Harbor.</i>										
For the removal of Middle Rocky, designated on the chart as Rocky Buoy, in the harbor of New Haven, Conn.....	Aug. 30, 1852	10	57		6,000 00	1854	100 00			100 00
For improvement of New Haven Harbor.....	July 11, 1870	16	225	1	15,000 00	1855	5,900 00			5,900 00
For removal of rocks at New Haven Harbor.....	Mar. 3, 1871	16	541	1	40,000 00	1871	10,000 00			10,000 00
	June 10, 1872	17	375	1	15,000 00	1872	40,000 00			40,000 00</

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>New Haven Harbor—Continued.</i>										
For the improvement of New Haven Harbor	June 10, 1872	17	374	1	\$20,000 00	1873	\$25,000 00			\$25,000 00
	Mar. 3, 1873	17	565	1	25,000 00	1874	35,000 00			35,000 00
	Mar. 3, 1875	18	460	1	10,000 00	1875	5,000 00			5,000 00
	June 18, 1878	20	158	1	25,000 00	1879	25,000 00			10,000 00
	Mar. 3, 1879	20	363	1	15,000 00	1880	15,000 00			25,000 00
For the improvement of New Haven Harbor, continuing improvement.	June 14, 1880	21	180	1	15,000 00	1881	15,000 00			15,000 00
	Mar. 3, 1881	21	469	1	15,000 00	1882	15,000 00			15,000 00
Total					201,000 00		201,000 00	\$250 56	\$250 56	200,749 44
<i>New London Harbor.</i>										
For improving New London Harbor, Connecticut.	Mar. 3, 1881	21	473	1	4,300 00	1882	4,300 00			4,300 00
<i>Norwalk Harbor.</i>										
For making a survey of the harbor of Norwalk, Connecticut, with a view to its improvement.	Mar. 2, 1829	4	347	1	80 00	1829	80 00			80 00
For the improvement of Norwalk Harbor, Connecticut, between the bridge and the railroad drawbridge.	June 10, 1872	17	374	1	10,000 00	1873	15,000 00			15,000 00
	Mar. 3, 1873	17	565	1	10,000 00	1874	5,000 00			5,000 00
	June 23, 1874	18	241	1	10,000 00	1875	15,000 00			15,000 00
	Mar. 3, 1875	18	460	1	7,000 00	1876	2,000 00			2,000 00
For the improvement of Norwalk Harbor.	June 18, 1878	20	159	1	6,000 00	1879	6,000 00			6,000 00
	Mar. 3, 1879	20	363	1	10,000 00	1880	10,000 00			10,000 00
For improving harbor at Norwalk, of which sum not exceeding \$1,500 shall be expended on the bar below the bridge.	June 14, 1880	21	180	1	5,000 00	1881	5,000 00			5,000 00
For continuing improvement, and so much of said appropriation as shall be necessary therefor shall be so expended as to have the channel 6 feet deep at low water between the steamboat landing in said Norwalk and Long Island Sound.	Mar. 3, 1881	21	469	1	5,000 00	1882	5,000 00			5,000 00
For improving harbor at Norwalk.					63,080 00		63,080 00			63,080 00
Total										
<i>Pawcatuck River.</i>										
Connecticut and Rhode Island. See "Miscellaneous," post.										
<i>Saybrook Harbor.</i>										
For improving the harbor of Saybrook, Conn., by removing the bar at the mouth of Connecticut River	July 4, 1836	5	129	1	20,000 00	1837	500 00	500 00	15,710 00	4,290 00
For improving the harbor of Saybrook by removing the bar at the mouth of Connecticut River, being the balance of an appropriation carried to the surplus fund	Mar. 3, 1839	5	347	1	15,710 00	1839	6,460 00			6,460 00
To pay Randall, Haskell and Holmes balance due	Mar. 1, 1843	6	888		3,471 57	1841	9,250 00	50 09	50 09	9,199 91
Total					39,181 57		23,971 57	550 09	15,760 09	23,421 48
<i>Southport Harbor.</i>										
For securing the public works at the harbor of Southport, Conn.	July 14, 1836	5	129	1	1,500 00	1836	1,000 00			1,000 00
For the repair of the breakwater and piers at the harbor of Southport	Mar. 3, 1837	5	189	1	1,000 00	1837	1,500 00			1,500 00
Total					5,000 00	1876	5,000 00			5,000 00

For continuing improvement.....	Aug. 4, 1876	19	135	1	5,000 00	1877	3,000 00	.....	.....	3,000 00
	June 14, 1880	21	180	1	2,500 00	1878	2,000 00	.....	.....	2,000 00
	Mar. 3, 1881	21	469	1	2,500 00	1881	2,500 00	.....	.....	2,500 00
	.....	.....	.....	.....	.....	1882	2,500 00	.....	.....	2,500 00
Total .....	.....	.....	.....	.....	17,500 00	.....	17,500 00	.....	.....	17,500 00
<i>Stamford Harbor.</i>										
For making a survey of the harbor of Stamford, Connecticut, with a view to its improvement.....	Mar. 2, 1829	4	347	1	100 00	1829	100 00	.....	.....	83 40
	.....	.....	.....	.....	.....	1833	.....	16 60	16 60	.....
Total .....	.....	.....	.....	.....	100 00	.....	100 00	16 60	16 60	83 40
<i>Stonington Harbor.</i>										
For making a survey and examination to ascertain the expediency and expense of erecting a pier in Stonington Harbor, Connecticut.....	Mar. 2, 1827	4	229	1	200 00	1827	200 00	.....	.....	200 00
	May 23, 1828	4	289	1	20,000 00	1829	19,358 14	6 37	.....	19,351 77
	Apr. 23, 1830	4	395	.....	16,491 67	1830	9,712 72	.....	6 37	9,712 72
	.....	.....	.....	.....	.....	1831	5,250 00	.....	.....	5,250 00
Towards erecting piers or other works at or near Stonington Harbor for the purpose of making the same a good and secure harbor .....	.....	.....	.....	.....	.....	1832	.....	2,170 81	.....	.....

For erecting piers or other works at or near Stonington Harbor	June 27, 1834	4	698	1	262 16	1835	262 16	.....	.....	262 16

For payment of balance due Gurdon Trumbull, superintendent of the public works at Stonington Harbor	Mar. 3, 1873	17	565	1	25,000 00	1874	25,000 00	.....	.....	25,000 00
	June 23, 1874	18	241	1	20,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1875	18	460	1	25,000 00	1875	20,000 00	.....	.....	20,000 00
	.....	.....	.....	.....	.....	1876	25,000 00	.....	.....	25,000 00
For the improvement of Stonington Harbor by deepening and dredging the same and its approaches	June 18, 1878	20	159	1	40,000 00	1879	40,000 00	.....	.....	40,000 00
	Mar. 3, 1879	20	363	1	37,500 00	1880	37,000 00	.....	.....	37,000 00
	June 14, 1880	21	190	1	25,000 00	1881	25,500 00	.....	.....	25,500 00
	Mar. 3, 1881	21	469	1	30,000 00	1882	30,000 00	.....	.....	30,000 00
Total .....	.....	.....	.....	.....	239,453 83	.....	237,283 02	6 37	2,177 18	237,276 65
<i>Thames River.</i>										
For making a survey of the river Thames with a view to improve the navigation of the same, and the cost of such improvements.....	Mar. 2, 1829	4	347	2	150 00	1829	150 00	.....	.....	144 76
	.....	.....	.....	.....	.....	1833	.....	5 24	5 24	.....
For deepening the channel of the river Thames leading into Norwich Harbor.....	July 4, 1836	5	129	1	10,000 00	1836	10,000 00	.....	.....	10,000 00
	Mar. 3, 1837	5	189	1	20,000 00	1837	20,000 00	.....	.....	20,000 00
For continuing the improvement of the channel of the river Thames leading into Norwich Harbor, Connecticut.....	July 7, 1838	5	269	1	10,000 00	1838	10,000 00	.....	.....	10,000 00
	June 23, 1866	14	71	1	10,000 00	.....	.....	.....	.....	.....
For improvement of Thames River.....	Mar. 2, 1867	14	420	1	36,000 00	1867	16,000 00	.....	.....	16,000 00
	Mar. 2, 1867	14	469	1	36,000 00	1868	26,000 00	.....	.....	26,000 00
For dredging and maintaining the channel of the Thames river near Norwich, to complete the work.....	.....	.....	.....	.....	.....	1869	30,000 00	6 09	.....	.....
	Mar. 3, 1871	16	540	1	15,000 00	1870	9,909 84	.....	.....	9,909 84
For the improvement of the Thames River.....	June 10, 1872	17	374	1	10,000 00	1871	1,044 74	548 58	.....	496 16
	.....	.....	.....	.....	.....	1872	5,000 00	30	.....	4,969 70
For the improvement of the Thames River to secure a 14-foot channel.....	June 20, 1878	20	159	1	10,000 00	1873	19,600 00	.....	30	19,600 00
	.....	.....	.....	.....	.....	1877	10,000 00	.....	.....	10,000 00
For the improvement of the Thames River, of which sum \$2,500 shall be expended in the removal of rocks and sand from New London Harbor.....	Mar. 3, 1879	20	363	1	12,000 00	1880	12,000 00	.....	.....	12,000 00

For improving Thames River.....	June 14, 1880	21	184	1	25,000 00	1881	25,000 00	.....	.....	25,000 00
	Mar. 3, 1881	21	473	1	30,000 00	1882	10,000 00	.....	.....	10,000 00
Total .....	.....	.....	.....	.....	224,150 00	.....	204,704 58	500 12	5 54	204,144 46
Balance .....	.....	.....	.....	.....	.....	.....	.....	20,000 00	.....	.....

NOTE.—The act of March 3, 1821 (3 Statutes, 685), appropriated \$150 "For the purpose of enabling the Secretary of the Navy to remove obstructions placed in the river Thames, in Connecticut, by the commander of the American ships during the late war." This sum was so expended in 1821, and is included in the expenditures on account of the Navy Department. (See Senate Ex. Doc. No. 3, 1st Sess. 45th Cong., page 110.)

For carrying on the works of the Delaware breakwater for the year 1830, and for carrying on the same works during the first quarter of 1831.....	Apr. 23, 1830	4	335	100,000 00	1830	269,222 00	269,222 00	269,222 00
For carrying on the work of the Delaware breakwater.....	Apr. 23, 1830	4	395	62,000 00	1831	251,031 50	251,031 50	251,031 50
For carrying on the Delaware breakwater.....	Mar. 2, 1831	4	460	208,000 00	1832	225,750 00	225,750 00	225,750 00
For the Delaware breakwater: <i>Provided</i> , That only so much of this sum shall be applied as in the opinion of the Secretary of War may be advantageously expended in the present situation of the said work.....	July 3, 1832	4	551	270,000 00	1833	331,058 02	331,058 02	331,058 02
For continuing the Delaware breakwater.....	Mar. 3, 1833	4	648	270,000 00	1834	269,130 29	269,130 29	269,130 29
For a survey of Crow Shoal in Delaware Bay to ascertain the expediency of constructing a breakwater or artificial harbor.....	June 28, 1834	4	703	270,000 00	1835	37,648 16	37,648 16	37,648 16
For continuing the Delaware breakwater, and constructing a wharf or mole pursuant to the report of Captain Delafield.....	July 2, 1835	4	754	100,000 00	1836	145,595 00	145,595 00	145,595 00
For continuing the Delaware breakwater.....	July 4, 1836	5	67	1,000 00	1837	1,000 00	1,000 00	1,000 00
For continuing the Delaware breakwater.....	Mar. 3, 1837	5	189	141,000 00	1838	163,076 60	163,076 60	163,076 60
For continuing the Delaware breakwater.....	July 7, 1838	5	269	150,000 00	1839	75,000 00	75,000 00	75,000 00
For continuing the Delaware breakwater.....	Aug. 30, 1839	10	56	30,000 00	1840	3,969 34	3,969 34	3,969 34
For continuing the Delaware breakwater.....	Feb. 20, 1863	12	655	107,910 00	1867	27,800 00	27,800 00	27,800 00
For permanent works of the Delaware breakwater harbor.....	July 2, 1864	13	354	109,493 70	1868	45,000 00	45,000 00	45,000 00
For completion and repair of Delaware breakwater, Delaware Bay.....	June 23, 1866	14	71	107,910 00	1870	56,701 42	56,701 42	56,701 42
For improvement of Delaware breakwater, Delaware Bay.....	Mar. 2, 1867	14	420	109,493 70	1871	27 40	27 40	27 40
For the removal from the harbor at Delaware breakwater and the entrance thereto, and in the main ship channel of the Delaware Bay and river, several vessels which were sunk in the year 1877, and now forming obstructions endangering the safety of vessels entering said harbor, after reasonable notice to the owners of such vessels to remove the same.....	Jan. 23, 1880	21	61	25,000 00	1872	1,000 00	1,000 00	1,000 00
Total.....				2,417,103 70	1873	953 40	953 40	953 40
Duck Creek.					1880	15,500 00	15,500 00	15,500 00
For improving the mouth of Duck Creek, Delaware.....	June 14, 1880	21	190	5,000 00	1882	2,203,591 27	2,203,591 27	2,203,591 27
Total.....	Mar. 3, 1881	21	474	3,000 00	1881	8,000 00	8,000 00	8,000 00
Lewes Pier.								
For constructing a good and substantial pier of stone or iron at or near Lewes, Del.....	July 15, 1870	16	310	225,000 00	1871	8,000 00	8,000 00	8,000 00
For continuing United States pier in Delaware Bay near Lewes.	June 23, 1874	18	240	10,000 00	1872	78,500 00	78,500 00	78,500 00
For constructing pier in Delaware Bay near Lewes.....	Mar. 3, 1875	18	457	25,000 00	1873	130,500 00	130,500 00	130,500 00
Total.....	Mar. 3, 1875	18	459	15,000 00	1874	8,000 00	8,000 00	8,000 00
	Aug. 14, 1876	19	134	30,000 00	1875	43,000 00	43,000 00	43,000 00
	June 18, 1878	20	159	20,000 00	1876	7,000 00	7,000 00	7,000 00
	Mar. 3, 1879	20	364	10,500 00	1877	20,000 00	20,000 00	20,000 00
	June 14, 1880	21	181	10,000 00	1878	11,619 77	11,619 77	11,619 77
	Mar. 3, 1881	21	470	10,000 00	1879	20,000 00	20,000 00	20,000 00
Total.....				355,500 00	1880	10,500 00	10,500 00	10,500 00
					1881	15,000 00	15,000 00	15,000 00
					1882	5,000 00	5,000 00	5,000 00
						357,119 77	357,119 77	357,119 77
						1,619 77	1,619 77	1,619 77
						2,194,811 51	2,194,811 51	2,194,811 51



Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Mispillion Creek.</i>										
For improving Mispillion Creek, Delaware	Mar. 3, 1879	20	370	1	\$3,000 00	1880	\$3,000 00			\$3,000 00
	June 14, 1880	21	185	1	4,000 00	1881	5,500 00			5,500 00
	Mar. 3, 1881	21	474	1	3,500 00	1882	2,000 00			2,000 00
Total					10,500 00		10,500 00			10,500 00
<i>New Castle Harbor.</i>										
For building piers at proper sites, in the River Delaware, at New Castle, and for repairing the old piers at the same place, and deepening the water around them	May 20, 1826	4	176	1	25,000 00	1826	104 01			104 01
						1827	2,000 00			2,000 00
						1828	5,000 00		\$17,895 99	5,000 00
For piers at New Castle, Del.	Mar. 2, 1829	4	349	1	17,895 99	1829	17,895 99			17,895 99
						1831	26 92	\$26 92		
	July 2, 1836	5	68		25,000 00	1836	25,000 00			25,000 00
	Mar. 3, 1837	5	189	1	10,000 00	1837	10,000 00			10,000 00
	July 7, 1838	5	269	1	11,573 00	1838	7,000 00			7,000 00
For continuing the improvement of the harbor at New Castle.						1839	3,690 00			3,690 00
						1840	883 00		373 18	509 82
	Aug. 30, 1862	10	60		15,000 00	1853	500 00		373 18	500 00
						1854	14,506 00			14,384 12
For repairing the piers and for improving the harbor at New Castle.						1857	115 88			100 00
						1858			15 88	
	July 15, 1870	16	297	1	2,500 00	1871	2,500 00			2,500 00
For the repair of pier of the ice-harbor at New Castle, and for building a new pier at said harbor	June 10, 1872	17	373	1	27,000 00	1873	22,000 00			22,000 00
	Mar. 3, 1873	17	564	1	20,000 00	1874	20,500 00			20,500 00
For the removal of obstructions in the harbor and the construction of a pier at New Castle	June 27, 1874	18	240	1	10,000 00	1875	7,500 00			7,500 00
	Mar. 3, 1875	18	457	1	20,000 00	1876	27,000 00			27,000 00
For the construction of piers of ice harbor, and removing obstructions at New Castle	Aug. 14, 1876	19	137	1	12,000 00	1877	6,000 00			6,000 00
For continuing the construction of ice-harbor at New Castle						1878	10,815 48	4,815 48		6,000 00
For piers of ice-harbor at New Castle	June 18, 1878	20	153	1	10,000 00	1879	10,000 00			10,000 00
For piers of ice-harbor at New Castle	Mar. 3, 1879	20	364	1	5,500 00	1880	5,500 00			5,500 00
For piers of ice-harbor at New Castle, continuing operations	June 14, 1880	21	181	1	3,000 00	1881	3,000 00			3,000 00
For piers of ice-harbor at New Castle, completing improvement.	Mar. 3, 1881	21	470	1	20,000 00	1882	20,000 00			20,000 00
Total					234,468 99		221,537 28	5,353 34	18,285 05	216,183 94
<i>Reedy Island Harbor.</i>										
For defraying the expense of an examination of the public piers at Port Penn, Marcus Hook, and Fort Mifflin, in the Delaware River, in the States of Pennsylvania and Delaware, in order to determine the expediency and expense of repairing and improving the same	Mar. 2, 1827	4	229	1	100 00	1827	100 00			100 00
For repairing the public piers at Port Penn, Marcus Hook, and Fort Mifflin	May 23, 1828	4	259	1	4,413 00	1828	4,413 00			4,376 89
						1829		36 11		
	Apr. 23, 1830	4	395		10,000 00	1830	6,600 00			6,600 00
	Mar. 2, 1831	4	460		4,000 00	1831	7,400 00			7,396 56
	July 3, 1832	4	552	1	10,000 00	1832	5,550 00	3 44		5,550 00
	Mar. 2, 1833	4	648	1	4,000 00	1833	7,500 00			7,500 00
For improving the harbors of Port Penn, New Castle, Marcus Hook, and Chester, in the Delaware River	June 28, 1834	4	703		6,133 00	1834	2,050 00			2,050 00
	Mar. 3, 1835	4	754		6,000 00	1835	11,033 00			11,010 92
						1837		22 08		

For the construction of a harbor on the east side of Reedy Island, Port Penn, Del	Aug. 30, 1852	10	56	1	51,090 00	1853	18,000 00	.....	.....	18,000 00
	.....	.....	.....	.....	.....	1854	33,090 00	.....	.....	32,964 03
	.....	.....	.....	.....	.....	1857	.....	125 97	.....	.....
	.....	.....	.....	.....	.....	1858	125 97	.....	.....	47 57
	.....	.....	.....	.....	.....	1859	.....	97	.....	.....
	.....	.....	.....	.....	.....	1861	.....	77 43	.....	.....
Total .....	.....	.....	.....	.....	95,736 00	.....	95,861 97	266 00	140 03	95,595 97
<i>Saint Jones River.</i>										
For the improvement of Saint Jones River, Delaware	Mar. 3, 1881	21	482	1	5,000 00	1881	500 00	.....	.....	500 00
Balance .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Wilmington Harbor.</i>										
For improving the harbor of Wilmington by removing the bar at the mouth of Christiana River according to the plans recommended by Hartman Bache, of the Engineer Corps	July 4, 1836	5	130	1	15,000 00	1836	15,000 00	.....	.....	15,000 00
	Mar. 3, 1837	5	189	1	8,000 00	1837	3,000 00	.....	.....	3,000 00
	July 7, 1838	5	269	1	9,356 00	1838	5,000 00	.....	.....	5,000 00
For continuing the improvement of the harbor of Wilmington, Del .....	.....	.....	.....	.....	.....	1839	2,797 00	.....	.....	2,797 00
	.....	.....	.....	.....	.....	1840	4,147 78	2,411 22	.....	4,147 78
	July 11, 1870	16	226	1	15,000 00	1871	6,500 00	.....	.....	6,500 00
	June 10, 1872	17	373	1	10,000 00	1872	8,500 00	.....	.....	8,500 00
	Mar. 3, 1873	17	564	1	6,000 00	1873	11,000 00	.....	.....	11,000 00
For the improvement of Wilmington Harbor .....	.....	.....	.....	.....	.....	1874	5,000 00	.....	.....	5,000 00
	June 23, 1874	18	240	1	6,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1875	18	459	1	10,000 00	1875	8,000 00	.....	.....	8,000 00
For removing the obstructions from, and the improvement of, the harbor at Wilmington .....	.....	.....	.....	.....	.....	1876	8,000 00	.....	.....	8,000 00
	Aug. 14, 1876	19	134	1	16,000 00	1877	12,500 00	.....	.....	12,500 00
For improving harbor at Wilmington .....	.....	.....	.....	.....	.....	1878	7,259 90	3,759 90	.....	3,759 90
For improving harbor at Wilmington: to dredge the bar and channel at the mouth of the Christiana River, and make such survey as may be necessary to determine the site of such works as may be necessary for the permanent improvement of said river	June 18, 1878	20	159	1	7,000 00	1879	7,000 00	.....	.....	7,000 00
	Mar. 3, 1879	20	364	1	3,500 00	1880	3,500 00	.....	.....	3,500 00
For improving Christiana River and Wilmington Harbor, deepening the channel and improving the harbor of Christiana River from the Delaware River to and above the site of Wilmington, in accordance with the surveys and plans of the United States Engineer department	June 14, 1880	21	181	1	10,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1881	21	480	1	50,000 00	1881	11,500 00	.....	.....	11,500 00
	.....	.....	.....	.....	.....	1882	21,500 00	.....	.....	21,500 00
Total .....	.....	.....	.....	.....	165,856 00	.....	140,204 68	3,759 90	2,411 22	136,444 78
Balance .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
FLORIDA.										
<i>Appalachicola River.</i>										
For removing obstructions in the Appalachicola River, in the Territory of Florida	May 23, 1828	4	289	1	3,000 00	1828	1,500 00	.....	.....	1,500 00
For completing the removal of obstructions in the Appalachicola River, in Florida	Apr. 23, 1830	4	395	.....	2,000 00	1830	1,500 00	.....	.....	1,500 00
For the completion of the removal of the obstructions in the harbor and river Appalachicola, in Florida, according to the report and estimate of the engineer, Lieutenant Long, including the unexpended appropriation of last year	Mar. 2, 1831	4	460	.....	8,000 00	1831	8,000 00	.....	.....	8,000 00
For a survey of the East Pass into Appalachicola Bay and river, to ascertain the practicability and cost of removing obstructions and improving the harbor	Mar. 2, 1833	4	649	1	8,700 00	1833	5,000 00	.....	.....	5,000 00
For removing a mud shoal called the Bulk Head, in the channel from East Pass to Appalachicola .....	.....	.....	.....	.....	.....	1834	3,700 00	.....	.....	3,542 03
For deepening the straight channel of the East Pass to Appalachicola .....	.....	.....	.....	.....	.....	1839	.....	157 97	.....	.....
For compensation to William Gibbs McNeill, being an excess of expenditures over and above the appropriation for surveys made under his direction, of the East Pass of the Appalachicola Bay	June 30, 1834	4	723	.....	500 00	1834	500 00	.....	.....	500 00
	July 4, 1836	5	130	1	10,000 00	1837	100 00	.....	.....	100 00
	Mar. 3, 1839	5	347	1	9,900 00	1839	9,900 00	.....	.....	9,900 00
	May 8, 1840	5	379	.....	150 29	1840	150 29	.....	.....	150 29

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.		Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.						
<i>Appalachicola River—Continued.</i>									
For the improvement of the Appalachicola River.....	June 23, 1874	18	240	\$10,000 00	1875	\$10,000 00			\$10,000 00
	Mar. 3, 1875	18	459	10,000 00	1876	3,000 00			3,000 00
For improving the Appalachicola River, including the slough connecting the Appalachicola with the Chipola River.....	June 18, 1878	20	153	8,000 00	1877	5,000 00			5,000 00
	Mar. 3, 1879	20	365	2,000 00	1878	2,000 00			2,000 00
For improving Appalachicola Bay.....	June 14, 1880	21	476	1,500 00	1879	8,000 00			8,000 00
	Mar. 3, 1881	21	470	10,000 00	1880	5,000 00			5,000 00
Total.....				98,750 29		88,850 29	\$157 97	\$10,057 97	88,692 32
<i>Cedar Keys Harbor.</i>									
For dredging the bar at the mouth of the harbor of Cedar Keys, Fla.....	June 10, 1872	17	373	7,500 00	1874	545 00			545 00
	Mar. 3, 1875	18	459	15,000 00	1875	6,846 50			6,846 50
For the improvement of the harbor at Cedar Keys.....	Aug. 14, 1876	19	135	10,000 00	1876	15,108 50			15,108 50
	June 18, 1878	20	153	20,000 00	1877	10,000 00			10,000 00
Total.....	Mar. 3, 1879	20	365	15,000 00	1879	20,000 00			20,000 00
	June 14, 1880	21	181	15,000 00	1880	10,000 00			10,000 00
				82,500 00	1881	15,500 00			15,500 00
					1882	4,500 00			4,500 00
				82,500 00		82,500 00			82,500 00
<i>Chattahoochee and Flint Rivers.</i>									
Florida, Alabama, and Georgia. See "Miscellaneous," post.									
<i>Chipola River.</i>									
For removing obstructions in the Chipola River, in Florida.....	Feb. 24, 1835	4	753	5,000 00	1835	1,000 00			1,000 00
	July 2, 1836	5	68	4,000 00	1836	2,000 00			2,000 00
For continuing the removal of obstructions in the Chipola River, in the Territory of Florida.....					1838			6,000 00	
Total.....				9,000 00		3,000 00		6,000 00	3,000 00
<i>Choctawhatchee River.</i>									
Florida and Alabama. See "Miscellaneous," post.									
<i>Cumberland Sound.</i>									
Florida and Georgia. See "Miscellaneous," post.									
<i>Escambia River.</i>									
Florida and Alabama. See "Miscellaneous," post.									
<i>Indian River.</i>									
For connecting the waters of Indian River and Mosquito Lagoon, at the Haulever, Florida.....	June 11, 1844	5	670	1,500 00	1848			1,500 00	
	Aug. 30, 1852	10	60	5,000 00	1853	400 00			400 00
					1854	4,600 00			4,594 94
					1857		5 06		
					1858			5 06	
Total.....				6,500 00		5,000 00	5 06	1,505 06	4,994 94

<i>Oculachaba River.</i> For clearing out the Ochlawaba River from the Saint John's to Glassell's Spring, near Camp King, for the transportation of provisions and military stores to the garrison at that place, as estimated in the report of the Quartermaster-General.....	Feb. 24, 1835	4	752	.....	10,000 00	1835	6,000 00	.....	48 58 1,074 10 965 37	4,048 58 1,074 10 965 37	3,911 95
Total.....					10,000 00	.....	6,000 00	.....	2,088 05	6,088 05	3,911 95
<i>Ochlochney River.</i> For improving the navigation of the Ochlochney River, Florida.....	Mar. 2, 1833	4	645	1	5,000 00	1833	5,000 00	.....	.....	.....	5,000 00
<i>Peas Creek.</i> For improving Peas Creek, Florida.....	Mar. 13, 1881	21	476	1	7,000 00	1882	7,000 00	.....	.....	.....	7,000 00
<i>Pensacola Harbor.</i> For improving the harbor, including survey and estimate for removal of wrecks at Pensacola, Fla.....	June 18, 1878	20	158	1	20,000 00	1879	15,000 00	.....	.....	.....	15,000 00
	Mar. 3, 1879	20	365	1	10,000 00	1880	2,000 00	.....	.....	.....	2,000 00
	June 14, 1880	21	181	1	40,000 00	1881	3,000 00	.....	.....	.....	3,000 00
For improving Pensacola Harbor.....	Mar. 3, 1881	21	481	1	20,000 00	1882	25,000 00	.....	.....	.....	25,000 00
Total.....					90,000 00	.....	45,000 00	.....	.....	.....	45,000 00
Balance.....					.....	.....	45,000 00	.....	.....	.....	.....
<i>Saint Augustine Harbor.</i> For making a survey of the harbor of Saint Augustine, and the bar or near the entrance of the same, with a view to remove the latter, and to render the access to the harbor safe at all times, and to make an estimate of the cost of accomplishing that object.....	Mar. 2, 1829	4	348	2	300 00	1829	300 00	.....	.....	.....	300 00
For payment of Maj. P. H. Perrault balance due on account of the survey of the harbor of Saint Augustine, Fla.....	June 27, 1834	4	698	1	2 84	1834	2 84	.....	.....	.....	2 84
	Mar. 3, 1841	5	415	.....	15,000 00	.....	10,800 00	.....	.....	.....	10,800 00
	Sept. 9, 1841	5	459	1	5,000 00	1841	4,200 00	.....	.....	.....	4,200 00
	.....	.....	.....	.....	.....	1842	4,400 00	.....	.....	.....	4,400 00
	.....	.....	.....	.....	.....	1843	4,400 00	.....	.....	.....	4,400 00
	.....	.....	.....	.....	.....	1844	4,559 40	.....	.....	.....	4,559 40
	.....	.....	.....	.....	.....	.....	5,266 96	.....	.....	.....	5,266 96
	Mar. 3, 1845	5	744	.....	5,266 96	1846	40 00	.....	81 86	.....	5,225 10
	.....	.....	.....	.....	.....	1847	41 85	.....	.....	.....	41 85
	.....	.....	.....	.....	.....	1848	.....	.....	.....	.....	.....
	Mar. 3, 1849	9	374	.....	5,000 00	1850	4,500 00	.....	.....	.....	4,500 00
	.....	.....	.....	.....	.....	1852	500 00	.....	.....	.....	500 00
	Aug. 30, 1852	10	60	1	3,000 00	1853	1,100 00	.....	.....	.....	1,100 00
	.....	.....	.....	.....	.....	1854	1,900 00	.....	.....	.....	1,900 00
	.....	.....	.....	.....	.....	1857	.....	.....	6 17	.....	6 17
	.....	.....	.....	.....	.....	1858	.....	.....	90 20	90 20	.....
	.....	.....	.....	.....	.....	1861	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	1862	.....	.....	.....	.....	.....
Total.....					33,569 80	.....	33,651 66	.....	178 23	96 37	33,473 43
<i>Saint John's River.</i> For the improvement of the river Saint John, Florida.....	Aug. 30, 1852	10	60	1	10,000 00	1853	2,061 45	.....	.....	.....	2,061 45
	.....	.....	.....	.....	.....	1855	7,938 55	.....	.....	.....	7,111 38
	.....	.....	.....	.....	.....	1857	.....	.....	4 57	4 57	.....
	.....	.....	.....	.....	.....	1858	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	1861	.....	.....	822 60	822 60	.....
	.....	.....	.....	.....	.....	1862	.....	.....	.....	.....	.....
	July 11, 1870	16	225	1	15,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1871	16	541	1	15,000 00	1871	3,000 00	.....	.....	.....	3,000 00
	.....	.....	.....	.....	.....	1872	27,000 00	.....	.....	.....	27,000 00
	June 10, 1872	17	373	1	10,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	563	1	10,000 00	1873	10,000 00	.....	.....	.....	10,000 00
	.....	.....	.....	.....	.....	1874	10,000 00	.....	.....	.....	10,000 00

	June 23, 1874	18	240	1	10,000 00	1875	2,000 00	.....	.....	.....	2,000 00
	.....	.....	.....	.....	.....	1876	8,000 00	.....	.....	.....	8,000 00

	June 18, 1878	20	153	1	10,000 00	1879	10,000 00	.....	.....	.....	10,000 00

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Saint John's River</i> —Continued.										
For improving inside passage between Fernandina and Saint John's, Florida.....	Mar. 3, 1879	20	365	1	\$7,000 00	1880	\$7,000 00			\$7,000 00
For improving inside passage between Fernandina and Saint John's, continuing improvements at such point as may be selected by the chief engineer and approved by the Secretary of War.....	June 14, 1880	21	186	1	7,000 00	1881	3,000 00			3,000 00
For improving Saint John's River by deepening the bar at the mouth thereof, according to the report of the chief of engineers made to the Secretary of War and reported to this Congress.....	June 14, 1880	21	193	1	125,000 00	1881	15,000 00			15,000 00
For improving Saint John's River.....	Mar. 3, 1881	21	476	1	100,000 00	1882	210,000 00			210,000 00
Total.....					319 000 00		315,000 00	\$827 17	\$827 17	314,172 83
Balance.....									4,000 00	
<i>Saint John's and Saint Mary's Rivers.</i> Florida and Georgia. See "Miscellaneous," <i>post</i> .										
<i>Saint Mark's River.</i>										
For a survey of the river and harbor of Saint Mark's, in Florida, with a view to the practicability and expense of deepening the same.....	May 23, 1828	4	289		500 00	1828	302 75			302 75
For improving the harbor of Saint Mark's by removing obstructions in the same.....	Mar. 2, 1829	4	348	2	6,500 00	1830			197 25	
For completing the removal of obstructions in the river and harbor of Saint Mark's.....	Apr. 23, 1830	4	395		10,000 00	1830	7,000 00			7,000 00
For the completion of the improvement of the harbor and river Saint Mark's, as recommended by the chief engineer.....	Mar. 2, 1831	4	460		7,430 00	1831	6,000 00			6,000 00
For completing the improvement of Saint Mark's River and Harbor.....	July 3, 1832	4	552	1	4,500 00	1832	11,500 00			11,500 00
	Mar. 2, 1833	4	648	1	1,500 00	1833	5,430 00			5,430 00
	June 28, 1834	4	703		4,600 00	1834	4,500 00			4,429 21
						1836			100 00	
	June 15, 1844	5	670			1839		70 79		
For the removal of obstructions in the navigation of the river Saint Mark's above its confluence with the Wakulla River.....					2,500 00	1845	1,459 00			1,348 90
						1846		110 10		
						1848			1,151 10	
Total.....					37,530 00		36,191 75	180 80	1,519 14	36,010 86
<i>Suwannee River.</i>										
For the removal of obstructions at the mouth of the Suwannee River, and for the survey of the said river, with a view to its improvement.....	Mar. 3, 1839	5	331		15,000 00	1839	4,500 00			4,500 00
						1840	5,412 00			5,412 00
						1841	242 02		4,845 98	242 02
For improving Suwannee River, Florida.....	June 14, 1880	21	191	1	5,000 00	1881	5,000 00			5,000 00
	Mar. 3, 1881	21	476	1	3,000 00	1882	3,000 00			3,000 00
Total.....					23,000 00		18,154 02		4,845 98	18,154 02
<i>Tampa Bay.</i>										
For improving Tampa Bay, Florida, deepening the bar and channel from the bar to the town of Tampa.....	June 14, 1880	21	191	1	10,000 00	1881	10,000 00			10,000 00
	Mar. 3, 1881	21	470	1	10,000 00	1882	10,000 00			10,000 00
Total.....					20,000 00		20,000 00			20,000 00

	June 14, 1880 Mar. 3, 1881	21 21	192 476	1 1	5,000 00 5,500 00	1881 1882	5,000 00 5,500 00	..... .....	..... .....	5,000 00 5,500 00
<i>Volusia Bar.</i>										
For improving Volusia Bar, Florida.....										
Total					10,500 00	.....	10,500 00			10,500 00
<i>Withlacooche River.</i>										
For improving Withlacooche River, in Florida.....	Mar. 3, 1881	21	476	1	7,500 00	1882	7,500 00			7,500 00
<i>Yellow River.</i>										
For the survey of Yellow River, Florida, to ascertain the prac- ticability and cost of removing the rafts which obstruct its navigability.....	Mar. 3, 1839	5	331	.....	500 00	1839 1841 1845 1846	500 00	12 02 45 49	12 02 45 49	442 49
Total.....					500 00	.....	500 00	57 51	57 51	442 49
GEORGIA.										
<i>Altamaha River.</i>										
For improving Altamaha River, Georgia.....	Mar. 3, 1881	21	480	1	5,000 00	1882	5,000 00			5,000 00
<i>Brunswick Harbor.*</i>										
For the removal of the Brunswick Bar, with the view of im- proving the harbor of Brunswick.....	July 4, 1836	5	130	1	10,000 00	1837 1838	44 00	9,956 00	9,956 00	44 00
For improving Brunswick Harbor, Georgia.....	Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 21 21	372 181 470	1 1 1	20,000 00 10,000 00 5,000 00	1880 1881 1882	1,000 00 10,000 00 24,000 00			1,000 00 10,000 00 24,000 00
Total					45,000 00	.....	35,044 00	9,956 00	9,956 00	35,044 00
<i>Chattahooche and Flint Rivers.</i>										
Georgia, Alabama, and Florida. See "Miscellaneous," <i>post</i> .										
<i>Cosa River.</i>										
Georgia and Alabama. See "Miscellaneous," <i>post</i> .										
<i>Cumberland Sound.</i>										
Georgia and Florida. See "Miscellaneous," <i>post</i> .										
<i>Darien Harbor.</i>										
For the improvement of the harbor at Darien, Ga.....	June 13, 1878	20	158	1	8,000 00	1879	8,000 00			8,000 00
<i>Etowah River.</i>										
For the improvement of the Etowah River, Georgia.....	Aug. 14, 1876	19	135	1	10,000 00	1878 1881	1,000 00 237 80			1,000 00 237 80
Total					10,000 00	.....	1,237 80			1,237 80
Balance.....						.....		8,762 20	8,762 20	
<i>Flint River.</i>										
For improving Flint River, Georgia.....	June 18, 1878 Mar. 3, 1879	20 20	153 365	1 1	10,000 00 7,000 00	1879 1880	10,000 00 5,000 00			10,000 00 5,000 00
For continuing improvement; of which sum \$10,000 shall be expended below Albany, and \$10,000 between Albany and Montezuma.....	June 14, 1880 Mar. 3, 1881	21 21	186 476	1 1	20,000 00 15,000 00	1881 1882	22,000 00 15,000 00			22,000 00 15,000 00
For improving Flint River.....					52,000 00	.....	52,000 00			52,000 00
Total .....						.....
<i>Ockmulgee River.</i>										
For the improvement of the Ockmulgee River, Georgia.....	Aug. 14, 1876 June 18, 1878 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	19 20 20 21 21	135 155 368 186 476	1 1 1 1 1	15,000 00 15,000 00 7,000 00 7,000 00 5,000 00	1878 1879 1880 1881 1882	15,000 00 13,000 00 9,000 00 6,000 00 6,000 00			15,000 00 13,000 00 9,000 00 6,000 00 6,000 00
Total.....					49,000 00	.....	49,000 00			49,000 00

* See "Surveys," *post.*

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Oconee River. For the improvement of the Oconee River, Georgia; of which sum \$8,000 shall be expended between Dublin and the Central Railroad bridge, and \$2,000 between Dublin and the Ockmulgee River.....	June 18, 1878 Mar. 3, 1879 June 14, 1880	20 20 21	157 368 186	1 1 1	\$10,000 00 1,500 00 1,500 00	1879 1880 1881	\$5,000 00 6,500 00 1,500 00	..... ..... .....	..... ..... .....	\$5,000 00 6,500 00 1,500 00
For improving Oconee River, Georgia.....	Mar. 3, 1881	21	476	1	2,500 00	1882	2,500 00	.....	.....	2,500 00
For improving Oconee River; of which sum \$1,500 to be expended between Dublin and Oconee bridge.....	.....	.....	.....	.....	15,500 00	.....	15,500 00	.....	.....	15,500 00
Total .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oostanaula and Coosawattee Rivers. For the improvement of the Oostanaula River, Georgia.....	June 23, 1874 Mar. 3, 1875	18 18	250 459	..... 1	10,000 00 5,000 00	1875 1876	10,000 00 5,000 00	..... .....	..... .....	10,000 00 5,000 00
For the improvement of the Oostanaula and Coosawattee Rivers, Georgia.....	June 18, 1878 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 20 21 21	155 368 186 476	1 1 1 1	4,000 00 3,000 00 2,000 00 1,000 00	1879 1880 1881 1882	5,000 00 5,000 00 2,000 00 1,000 00	..... ..... ..... .....	..... ..... ..... .....	5,000 00 5,000 00 2,000 00 1,000 00
Total .....	.....	.....	.....	.....	25,000 00	.....	25,000 00	.....	.....	25,000 00
Saint Augustin's Creek. For improving Saint Augustin's Creek, Georgia.....	Mar. 3, 1879	20	365	1	5,000 00	1882	1,582 34	.....	.....	1,582 34
Balance .....	.....	.....	.....	.....	.....	.....	.....	.....	\$3,417 66	.....
Savannah Harbor.* For the improvement of Savannah Harbor and River, Georgia.....	June 10, 1872 Mar. 3, 1873 June 23, 1874 Mar. 3, 1875 Aug. 11, 1876 June 18, 1878 Mar. 3, 1879 June 14, 1880	17 17 18 18 19 20 20 21	373 563 240 459 134 153 365 181	1 1 1 1 1 1 1 1	50,000 00 50,000 00 50,000 00 70,000 00 62,000 00 70,000 00 100,000 00 65,000 00	1873 1874 1875 1876 1877 1878 1879 1881	35,000 00 65,000 00 50,000 00 70,000 00 30,000 00 32,000 00 25,000 00 55,000 00 50,048 75	..... ..... ..... ..... ..... ..... ..... .....	..... ..... ..... ..... ..... ..... ..... .....	35,000 00 65,000 00 50,000 00 70,000 00 30,000 00 32,000 00 25,000 00 55,000 00 50,048 75
For improving harbor at Savannah.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
For improving Savannah Harbor and River; of which sum \$1,000 may be applied to payment of damages for land taken for widening the channel opposite Savannah.....	Mar. 3, 1881	21	470	1	65,000 00	1882	169,951 25	.....	.....	169,951 25
Total .....	.....	.....	.....	.....	582,000 00	.....	582,000 00	.....	.....	582,000 00
Savannah River. To remove obstructions in the Savannah River, below the city of Savannah.....	May 18, 1826	4	173	2	50,000 00	1827	17,850 00	.....	.....	17,850 00
For the removal of the obstructions to the navigation of the Savannah River, between the mouth thereof and the city of Savannah, \$25,000, including the balance of the former appropriation to the same object, to be expended according to a plan and an estimate of the Department of War.....	Mar. 3, 1829	4	363	1	24,490 00	1829	15,536 59	.....	24,490 00	7,660 00
The act of March 2, 1833, provides, "That the Secretary of the Treasury pay to Peter Barry, jr., Stephen Norton, and Hiram Wolverton the sum of \$3,430.62, on account of the money and	July 3, 1832 Mar. 2, 1833	4 4	553 627	1 1	25,000 00 43 06	1831 1833	3,019 37 5,000 00 43 06	..... ..... .....	..... ..... .....	5,620 00 3,019 37 5,000 00 43 06

labor paid and bestowed by them in endeavoring to construct a dam across a part of the Savannah River, in the State of Georgia, under and by virtue of a contract made with a commissioner of the United States to remove obstructions in the mouth of said river, according to the act of May 18, 1826".....	Mar. 2, 1833	6	541	.....	8,430 62	1833	13,830 62	.....	.....	13,830 62
	June 28, 1834	4	703	.....	30,000 00	1834	14,643 06	.....	.....	14,643 06
For improving the navigation of the Savannah River, in removing the obstructions in said river from the city of Savannah to its mouth.....	Mar. 3, 1835	4	754	.....	20,000 00	1835	31,356 94	.....	.....	31,356 94
				.....	.....	1836	2,400 00	.....	.....	2,400 00
				.....	.....	1837	17,620 71	.....	\$1,420 71	16,200 00
For the improvement of the navigation of Savannah River.....	July 7, 1838	5	270	1	15,000 00	1839	10,135 00	.....	.....	10,135 00
				.....	.....	1840	4,882 81	.....	17 81	4,865 00
For the removal of obstructions in the Savannah River, at a place called the Wrecks, and the improvement of the navigation of said river.....	Aug. 30, 1852	10	56	.....	40,000 00	1853	4,000 00	.....	.....	4,000 00
				.....	.....	1854	36,000 00	.....	.....	36,000 00
	Mar. 3, 1855	10	640	.....	161,000 00	1855	5,000 00	.....	.....	5,000 00
				.....	.....	1856	39,000 00	.....	798 89	38,201 11
				.....	.....	1857	29,000 00	.....	02	28,999 98
To remove the obstructions in the Savannah River, below the city of Savannah, placed there during the revolutionary war for the common defense.....				.....	.....	1858	44,000 00	.....	.....	44,000 00
				.....	.....	1859	20,000 00	.....	1 35	19,998 65
				.....	.....	1860	16,000 00	.....	.....	16,000 00
				.....	.....	1861	8,000 00	.....	.....	8,000 00
				.....	.....	1863	.....	.....	163 28	.....
The act of February 27, 1874, provides, "That the Secretary of the Treasury be, and he is hereby, authorized and directed to pay Henry S. Welles, \$193,132.96, for expenditures made by him under his contracts of May 1 and July 5, 1846, for removing obstructions from the Savannah River and improving the harbor, prior to the date of the annulment of said contracts by the Secretary of the Treasury, which said sum shall be in full satisfaction to said Welles for all claims referred to in the report and recommendation from the Secretary of War."	Feb. 27, 1874	18	532	.....	193,132 96	1874	193,132 96	.....	.....	193,132 96
	June 14, 1880	21	193	1	16,000 00	.....	.....	.....	.....	.....
For improving Savannah River above Augusta, Ga.....	Mar. 3, 1881	21	476	1	8,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1881	21	480	1	15,000 00	1882	39,000 00	.....	.....	39,000 00
Total.....				.....	606,093 64	.....	582,731 12	2,402 06	25,767 54	580,329 05
<i>Survey of rivers.</i>										
The act of August 30, 1852, provides, "That the Secretary of War cause to be examined and surveyed the rivers Savannah, from the city of Savannah, as high up as the city of Augusta, the Ockmulgee up to Macon, and the Flint up to Albany, and the Chatahoochee up to Columbus, Ga., and to report to Congress the amount of money which may remove any obstructions to navigation....."	Aug. 30, 1852	10	60	.....	10,000 00	1853	7,000 00	.....	.....	7,000 00
				.....	.....	1856	3,000 00	.....	.....	2,370 87
				.....	.....	1857	.....	8 20	.....	.....
				.....	.....	1858	.....	7 42	.....	.....
				.....	.....	1860	.....	613 51	15 62	.....
Total.....				.....	10,000 00	.....	10,000 00	629 13	629 13	9,370 87
<i>IDAHO.</i>										
<i>Lower Clearwater River.</i>										
For improving Lower Clearwater River, Idaho.....	Mar. 3, 1879	20	370	1	5,000 00	1880	5,000 00	.....	.....	5,000 00
	June 14, 1880	21	189	1	5,000 00	1881	5,000 00	.....	.....	5,000 00
Total.....				.....	10,000 00	.....	10,000 00	.....	.....	10,000 00
<i>ILLINOIS.</i>										
<i>Andalusia Harbor.</i>										
See "Mississippi River," <i>post</i> .										
<i>Calumet Harbor.</i>										
For a harbor of refuge at Calumet, Ill.....	Mar. 3, 1871	16	539	1	50,000 00	1872	50,000 00	.....	.....	50,000 00
	June 10, 1872	17	370	1	40,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	560	1	40,000 00	1873	60,000 00	.....	.....	60,000 00
				.....	.....	1874	20,000 00	.....	.....	20,000 00
	June 23, 1874	18	237	1	25,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1875	18	456	1	25,000 00	1875	36,000 00	.....	.....	36,000 00
				.....	.....	1876	14,000 00	.....	.....	14,000 00
	Aug. 3, 1876	19	137	1	20,000 00	1877	20,000 00	8,000 00	.....	12,000 00
For the improvement of Calumet Harbor.....				.....	.....	1878	8,000 00	.....	.....	8,000 00

See "Surveys," *post*.

<i>Galena River.</i> For the improvement of Galena River, Illinois, making a chan- nel of 100 feet width, and the improvement of the harbor of Galena.....	June 18, 1878	20	157	1	30,000 00	1879	30,000 00				30,000 00	
	Mar. 3, 1879	20	367	1	12,000 00	1880	12,000 00				12,000 00	
	June 14, 1880	21	182	1	12,000 00	1881	12,000 00				12,000 00	
For improving Galena River and harbor.....	Mar. 3, 1881	21	471	1	12,000 00	1882	12,000 00				12,000 00	
Total					66,000 00		66,000 00				66,000 00	
<i>Illinois River.</i> For the improvement of the navigation of the Illinois River..	Aug. 30, 1852	10	60		30,000 00	1853	1,000 00				1,000 00	
						1854	10,861 00				10,861 00	
						1855	18,139 00				18,139 00	
	July 11, 1870	16	225	1	100,000 00	1871	62,000 00				62,000 00	
	Mar. 3, 1873	17	562	1	100,000 00	1872	29,000 00				29,000 00	
	June 23, 1874	18	239	1	75,000 00	1873	14,000 00				14,000 00	
	Mar. 3, 1875	18	458	1	75,000 00	1874	95,000 00				95,000 00	
	Aug. 14, 1876	19	137	1	40,000 00	1876	74,000 00				74,000 00	
	June 18, 1878	20	154	1	75,000 00	1877	76,000 00				76,000 00	
	Mar. 3, 1879	20	367	1	40,000 00	1878	20,000 00				20,000 00	
	June 14, 1880	21	187	1	110,000 00	1879	60,000 00				60,000 00	
	Mar. 3, 1881	21	478	1	250,000 00	1880	30,000 00				30,000 00	
For continuing improvement, of which sum \$100,000 shall be expended on locks and dams, and \$10,000 for dredging.....					895,000 00	1881	45,000 00				45,000 00	
For improving Illinois River						1882	75,000 00				75,000 00	
Total							630,000 00				630,000 00	
Balance										255,000 00		
<i>Ohio River.</i> Illinois and Kentucky. See "Miscellaneous," <i>post</i> . <i>Mississippi River.</i> Illinois, Arkansas, Iowa, Kentucky, Louisiana, Minnesota, Mis- sissippi, Missouri, Tennessee, and Wisconsin. See "Miscel- laneous," <i>post</i> . <i>Quincy Bay.</i> See "Mississippi River," <i>post</i> . <i>Rock Island Harbor.</i> See "Mississippi River," <i>post</i> . <i>Rock Island Rapids.</i> See "Mississippi River," <i>post</i> . <i>Wabash River.</i> Illinois and Indiana. See "Miscellaneous," <i>post</i> . <i>Waukegan Harbor.</i> For improvement of the harbor and breakwater at Waukegan, Ill.	Aug. 30, 1852	10	60		15,000 00	1853	3,073 33				3,073 33	
							5,830 88			10 55		5,820 33
							6,106 40			06		6,106 34
For harbor at Waukegan, Ill.: <i>Provided</i> , That this sum shall not be expended until a board of three engineers shall have been convened and selected the site, and until the same and a free right of way to all points of the harbor shall have been transferred or relinquished free of cost to the United States..	June 14, 1880	21	192	1	15,000 00	1881	3,000 00				3,000 00	
For improving harbor at Waukegan	Mar. 3, 1881	21	471	1	15,000 00	1882	22,000 00				22,000 00	
Total					45,000 00		40,010 61			10 61		40,000 00
Balance											5,000 00	
<i>Michigan City Harbor.</i> For the construction of a harbor at Michigan City according to the plan reported to the War Department.....	July 4, 1836	5	130	1	20,000 00	1836	20,000 00					20,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.		Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.						
Michigan City Harbor—Continued.									
For continuing the construction of a harbor at Michigan City, Ind.	Mar. 3, 1837 July 7, 1838	5 5	187 268	\$30,000 00 60,733 59	1837 1838	\$30,000 00 25,481 00			\$30,000 00 25,481 00
	June 11, 1844	5	662	25,000 00	1845	13,339 00			35,252 59
	Aug. 30, 1852	10	58	20,000 00	1853	11,661 00			13,339 00
For continuing the improvement of the harbor at Michigan City, Ind., or the laying down of a floating breakwater and safety anchorage, as the Secretary of War may determine.	1854				1854	1,900 00	\$27 81	\$5 15	11,661 00
	1855				1855	10,320 96	77		1,900 00
	1856				1856	7,802 47	465 07		10,233 15
To pay John R. Bones for services as agent	1857				1857	465 07			7,336 63
	Mar. 2, 1855	10	858	470 33	1856	470 33			465 07
For constructing works and improving the entrance into the harbor of Michigan City, Ind., \$75,000: <i>Provided</i> , That it shall first be shown to the satisfaction of the Secretary of War that a sum equal to double the amount aforesaid has been expended by the Michigan City Harbor Company in the construction of a safe and convenient harbor at that place: <i>And provided</i> , That the passage of vessels to and from said harbor shall be free and not subject to toll or charge....	June 23, 1866	14	73	75,000 00	1867	600 00			600 00
					1868	25,000 00			25,000 00
					1869	49,000 00			49,000 00
					1870	204 56	8 27		196 29
For improvement of Michigan City Harbor	July 11, 1870	16	223	25,000 00	1871	10,026 59			10,026 59
	Mar. 3, 1871	16	539	15,000 00	1872	20,177 12			20,177 12
	June 10, 1872	17	370	50,000 00	1873	60,000 00			60,000 00
	Mar. 3, 1873	17	560	50,000 00	1874	50,000 00			50,000 00
	June 23, 1874	18	238	50,000 00	1875	41,000 00			41,000 00
	Mar. 3, 1875	18	456	50,000 00	1876	59,000 00			59,000 00
	Aug. 14, 1876	19	136	35,000 00	1877	35,000 00			35,000 00
For the improvement of harbor, \$75,000; of which sum \$25,000 shall be expended for the improvement of the inner harbor....	June 18, 1878	20	155	75,000 00	1879	61,500 00	1,000 00		60,500 00
For improving harbor	Mar. 3, 1879	20	368	40,000 00	1880	54,500 00			54,500 00
For improving outside harbor, continuing operations; to be used and expended in improving the harbor	June 14, 1880	21	182	40,000 00					
For continuing operations at outside harbor; for continuing improvement on the inner harbor	June 14, 1880	21	182	15,000 00					
	Mar. 3, 1881	21	471	20,000 00	1881	59,500 00			59,500 00
	Mar. 3, 1881	21	471	25,000 00	1882	40,500 00			40,500 00
Total				721,203 92		722,700 69	1,501 92	5 15	721,198 77
Ohio River.									
Indiana, Illinois, Kentucky, Ohio, Pennsylvania, and West Virginia. See "Miscellaneous," <i>post</i> .									
Wabash River.									
Indiana and Illinois. See "Miscellaneous," <i>post</i> .									
White River.									
For improving White River, Indiana, from the Wabash River to Portersville, and to the falls on West Fork, according to report of Chief of Engineers, without constructing locks and dams	Mar. 3, 1879	20	372	25,000 00	1880	20,000 00			20,000 00
	June 14, 1880	21	187	20,000 00	1881	20,000 00			20,000 00
	Mar. 3, 1881	21	478	20,000 00	1882	25,000 00			25,000 00
Total				65,000 00		65,000 00			65,000 00

IOWA.									
<i>Burlington Harbor.</i>									
See "Mississippi River," <i>post</i> .									
<i>Des Moines and Iowa Rivers.</i>									
For the survey of the Des Moines and Iowa Rivers with a view {									
to the improvement of their navigation.....	July 7, 1838	5	304			1,000 00	1840	1,000 00	999 14
Total							1842	86	
<i>Des Moines Rapids.</i>									
See "Mississippi River," <i>post</i> .									
<i>Dubuque Harbor.</i>									
See "Mississippi River," <i>post</i> .									
<i>Fort Madison Harbor.</i>									
See "Mississippi River," <i>post</i> .									
<i>Guttenberg Harbor.</i>									
See "Mississippi River," <i>post</i> .									
<i>Mississippi River.</i>									
See "Miscellaneous," <i>post</i> .									
<i>Missouri River.</i>									
Iowa and Nebraska. See "Miscellaneous," <i>post</i> .									
<i>Muscatine Harbor.</i>									
See "Mississippi River," <i>post</i> .									
<i>Red Cedar River.</i>									
The act of March 3, 1839, provides, "That the Secretary of									
War be, and he is hereby, empowered to cause a survey of									
Red Cedar River, within Iowa Territory, and an estimate to									
be made with a view to the improvement of the navigation of									
thereof, above the town of Moscow, and the connection of									
the said navigation with the Mississippi River by a canal,									
extending from the vicinity of said town to some suitable point									
in or near the town of Bloomington"	Mar. 3, 1839	5	352	2		1,500 00	1839	1,500 00	1,500 00
<i>Rock Island Rapids.</i>									
See "Mississippi River," <i>post</i> .									
KENTUCKY.									
<i>Big Sandy River.</i>									
For improving Big Sandy River from Catlettsburg, Ky., to {									
head of navigation	June 18, 1878	20	157	1		12,000 00	1879	12,000 00	12,000 00
For improving Big Sandy River from Catlettsburg, Ky., to head	Mar. 3, 1879	20	368	1		12,000 00	1880	12,000 00	12,000 00
of navigation; of which sum \$50,000 shall be expended in									
the construction of works at Louisa, according to the recom-									
mendation of William E. Merrill, major of Engineers, in his									
annual report, dated August 12, 1879, and \$5,000 in the fur-									
ther improvement of the upper river	June 14, 1880	21	187	1		55,000 00	1881	10,000 00	10,000 00
For improving Big Sandy River from Catlettsburg, Ky., to head									
of navigation; of which sum \$46,000 shall be expended at Louisa,	Mar. 3, 1881	21	477	1		50,000 00	1882	5,500 00	5,500 00
and \$4,000 in the continuation of works on the upper river ...									
Total						129,000 00		39,500 00	39,500 00
Balance								89,500 00	
<i>Cumberland River.</i>									
Kentucky and Tennessee. See "Miscellaneous," <i>post</i> .									
<i>Kentucky River.</i>									
For improving the Kentucky River from the mouth to Three									
Forks, according to estimate and report of Maj. William E.									
Merrill, January 14, 1879	Mar. 3, 1879	20	370	1		100,000 00	1880	36,000 00	36,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditure.
		Volume.	Page.	Section.						
<i>Kentucky River</i> —Continued.										
For improving Kentucky River from its mouth to Three Forks. {	June 14, 1880	21	187	1	\$100,000 00	1881	\$160,000 00	.....	.....	\$160,000 00
	Mar. 3, 1881	21	477	1	125,000 00	1882	129,000 00	.....	.....	129,000 00
Total.....					325,000 00		325,000 00	.....	.....	325,000 00
NOTE.—The act of June 10, 1879 (21 Statutes, 8), provides "That such parts of the moneys heretofore appropriated by the act of which this is amendatory (act March 3, 1879), for the improvement of the Kentucky River, in the State of Kentucky, as may be necessary in the prosecution of said improvements as undertaken, may be expended in the purchase, voluntary or by condemnation as the case may be, of such sites as are necessary in the prosecution of said improvements."										
<i>Louisville and Portland Canal.</i>										
Kentucky and Indiana. See "Miscellaneous," post.										
<i>Mississippi River.</i>										
Kentucky and Missouri. See "Miscellaneous," post.										
<i>Ohio River.</i>										
Kentucky, Indiana, Illinois, Ohio, Pennsylvania, and West Virginia. See "Miscellaneous," post.										
<i>Tennessee River.</i>										
Kentucky, Alabama, and Tennessee. See "Miscellaneous," post.										
<i>Tradewater River.</i>										
For improving Tradewater River, Ky., open navigation.....	Mar. 3, 1881	21	480	1	3,000 00	1882	3,000 00	.....	.....	3,000 00
<i>Amite River.</i>										
For improving Amite River, Louisiana {	June 14, 1880	21	190	1	8,000 00	1881	300 00	.....	.....	300 00
	Mar. 3, 1881	21	476	1	5,000 00		.....	.....	.....	.....
Total.....					13,000 00		300 00	.....	.....	300 00
Balance.....								.....	\$12,700 00	
<i>Bayou Bartholomeu.</i>										
Louisiana and Arkansas. See "Miscellaneous," post.										
<i>Bayou Black.</i>										
For improving Bayou Black, in Louisiana.....	Mar. 3, 1881	21	480	1	10,000 00	1882	5,000 00	.....	.....	5,000 00
Balance.....								.....	5,000 00	
<i>Bayou Beauf.</i>										
For improving Bayou Beauf, Louisiana {	Mar. 3, 1881	21	480	1	5,000 00	1881	2,000 00	.....	.....	2,000 00
						1882	3,000 00	.....	.....	3,000 00
Total.....					5,000 00		5,000 00	.....	.....	5,000 00
<i>Bayou Courtableau.</i>										
For improving Bayou Courtableau, from Port Barre to Atchafalaya, Louisiana.....	June 14, 1880	21	190	1	7,500 00	1881	1,500 00	.....	.....	1,500 00
	Mar. 3, 1881	21	476	1	7,500 00	1882	7,500 00	.....	.....	7,500 00
Total.....					15,000 00		9,000 00	.....	.....	9,000 00
Balance.....								.....	6,000 00	

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Cypress Bayou.</i> Louisiana and Texas. See "Miscellaneous," <i>post</i> .										
<i>Lake Ponchartrain Harbor.</i>										
For the construction of a harbor on Lake Ponchartrain, near the city of New Orleans, La.	Aug. 30, 1852	10	58	.....	\$25,000 00	1854	\$12,000 00	.....	.....	\$12,000 00
						1855	13,000 00	.....	.....	12,442 33
						1859	.....	\$14 10	\$14 10	.....
						1871	.....	543 57	543 57	.....
						1872	.....	.....	.....	.....
Total.....					25,000 00	.....	25,000 00	557 67	557 67	24,442 33
<i>Mississippi River.</i> Louisiana and Mississippi. See "Miscellaneous," <i>post</i> .										
<i>New Orleans Harbor.</i> See "Mississippi River," <i>post</i> .										
<i>Ouachita River.</i> Louisiana and Arkansas. See "Miscellaneous," <i>post</i> .										
<i>Red River.</i> Louisiana, Arkansas, and Texas. See "Miscellaneous," <i>post</i> .										
<i>Tangipahoa River.</i>										
For the improvement of the Tangipahoa River, Louisiana	June 10, 1872	17	373	1	2,500 00	1873	2,500 00	.....	.....	2,397 50
						1876	.....	102 50	.....	.....
						1877	.....	.....	102 50	.....
	June 14, 1880	21	191	1	5,000 00	1881	100 00	.....	.....	100 00
	Mar. 3, 1881	21	476	1	2,000 00	1882	4,900 00	.....	.....	4,900 00
Total					9,500 00	.....	7,500 00	102 50	102 50	7,397 50
Balance .....					.....	.....	.....	.....	2,000 00	.....
<i>Tensas River.</i>										
For improving Tensas River, Louisiana.....	Mar. 3, 1881	21	480	1	3,000 00	1881	1,000 00	.....	.....	1,000 00
						1882	2,000 00	.....	.....	2,000 00
Total.....					3,000 00	.....	3,000 00	.....	.....	3,000 00
<i>Tickfaw River.</i>										
For improving Tickfaw River, Louisiana	Mar. 3, 1881	21	481	1	2,000 00	.....	.....	.....	.....	.....
Balance .....					.....	.....	.....	.....	2,000 00	.....
<i>Vermillion River.</i>										
For improving Vermillion River, Louisiana.....	June 14, 1880	21	190	1	5,000 00	1881	600 00	.....	.....	600 00
	Mar. 3, 1881	21	476	1	4,900 00	1881	4,600 00	.....	.....	4,600 00
Total.....					9,900 00	.....	5,200 00	.....	.....	5,200 00
Balance .....					.....	.....	.....	.....	4,700 00	.....

<i>Machias River.</i>	For the improvement of Machias River, Maine	Mar. 3, 1873	17	565	1	12,000 00	1873	1,000 00	.....	.....	.....	1,000 00
		June 23, 1874	18	241	1	10,000 00	1874	11,000 00	.....	.....	.....	11,000 00
		Mar. 3, 1875	18	460	1	10,000 00	1875	10,000 00	.....	.....	.....	10,000 00
							1876	4,000 00	.....	.....	.....	4,000 00
							1877	6,000 00	.....	.....	.....	6,000 00
	Total					32,000 00	.....	32,000 00	.....	.....	.....	32,000 00
<i>Matineus Island, Breakwater.</i>	For a survey in reference to the construction of a breakwater on the eastern side of the island of Matineus	Aug. 30, 1852	10	57	.....	1,000 00	1853	250 00	.....	.....	.....	162 30
							1854	750 00	.....	.....	.....	.....
							1856	.....	837 70	.....	837 70	.....
							1858	.....	.....	.....	.....	.....
	Total					1,000 00	.....	1,000 00	837 70	837 70	.....	162 30
<i>Moosabec Bar.</i>	For improving Moosabec Bar at Jonesport, Me.	Mar. 3, 1881	21	480	1	10,000 00	1882	10,000 00	.....	.....	.....	10,000 00
									
									
									
	Total					10,000 00	.....	10,000 00	.....	.....	.....	10,000 00
<i>Narraguagus River.</i>	For the improvement of the Narraguagus River, Maine.	Mar. 3, 1871	16	541	1	12,000 00	1871	7,000 00	.....	.....	.....	7,000 00
							1872	5,000 00	.....	.....	.....	5,000 00
		June 10, 1872	17	374	1	10,000 00	1873	7,000 00	.....	.....	.....	7,000 00
							1874	3,000 00	.....	.....	.....	3,000 00
	Total					22,000 00	.....	22,000 00	.....	.....	.....	22,000 00
<i>Owl's Head Harbor.</i>	For the survey of a ledge near Owl's Head Harbor to determine the expediency of erecting thereon a breakwater to improve said harbor	July 4, 1836	5	129	1	400 00	1836	400 00	.....	.....	.....	400 00
		Aug. 30, 1852	10	60	.....	15,000 00	1853	200 00	.....	.....	.....	200 00
							1855	14,800 00	.....	.....	.....	7,013 55
							1856	7,000 00	.....	14,786 45	.....	7,781 50
							1857	7,786 45	.....	4 95	.....	4 95
<i>Penobscot River.</i>	To pay A. and E. G. Colby a balance due on their contract for constructing a breakwater at Owl's Head Harbor	June 7, 1858	11	543	.....	2,502 11	1858	2,502 11	.....	.....	.....	2,502 11
									
									
									
	Total					17,902 11	.....	32,888 56	14,791 40	4 95	.....	17,897 16
<i>Penobscot River.</i>	For surveying the ship-channel of Penobscot River, from Whitehead to Bangor, and ascertaining the cost of improving the navigation of the same, and proper sites for spindles and buoys	Mar. 2, 1829	4	346	2	300 00	1829	300 00	.....	2 70	.....	297 30
							1831	.....	.....	.....	2 70	.....
	For improvement of the Penobscot River at Bangor and below	July 11, 1870	16	225	1	15,000 00	1871	25,000 00	.....	.....	.....	25,000 00
		Mar. 3, 1871	16	541	1	50,000 00	1872	40,000 00	.....	.....	.....	40,000 00
		June 10, 1872	17	314	1	40,000 00	1874	10,000 00	.....	.....	.....	10,000 00
<i>Penobscot River.</i>	For the improvement of the Penobscot River, Maine.	Mar. 3, 1873	17	565	1	20,000 00	1875	34,000 00	.....	.....	.....	34,000 00
		June 23, 1874	18	241	1	20,000 00	1876	36,000 00	.....	.....	.....	36,000 00
		Mar. 3, 1875	18	460	1	25,000 00	1877	15,000 00	.....	.....	.....	15,000 00
							1878	20,000 00	.....	.....	.....	20,000 00
	Total					10,000 00	.....	10,000 00	.....	.....	.....	10,000 00
<i>Penobscot River.</i>	For the improvement of the Penobscot River, \$25,000; and out of this appropriation \$10,000 shall be expended at or near Bucksport Narrows	Aug. 14, 1876	19	134	1	10,000 00	1877	15,000 00	.....	.....	.....	15,000 00
							1878	20,000 00	.....	.....	.....	20,000 00
	For the improvement of the Penobscot River, \$10,000; \$4,000 of which shall be expended at or near the "Narrows" in said river at Bucksport	June 18, 1878	20	158	1	12,000 00	1879	12,000 00	.....	.....	.....	12,000 00
		Mar. 3, 1879	20	363	1	6,000 00	1880	6,000 00	.....	.....	.....	6,000 00
	For improving Penobscot River, of which \$2,500, or so much thereof as may be necessary, shall be expended at or near the narrows in said river at Bucksport .....								.....	.....	.....
<i>Penobscot River.</i>	For improving Penobscot River .....								.....	.....	.....
									
									
									
	Total					198,300 00	.....	198,300 00	2 70	2 70	.....	198,297 30

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Piscataqua River.										
For making a survey to ascertain the practicability and utility of removing obstructions to navigation in Piscataqua River, and the expense of effecting the same.	May 20, 1826	4	176	1	\$200 00	1826	\$200 00			\$200 00
For removing obstructions in the Berwick branch of the Piscataqua River.	May 23, 1828	4	289	1	8,000 00	1828	2,900 00	\$9 54		2,890 46
For making a survey of Cocheo Branch of Piscataqua River, from Dover Falls to its confluence with the Piscataqua, for the purpose of ascertaining the practicability of removing obstructions to navigation and the cost.	Mar. 2, 1829	4	346	2	60 00	1829	3,230 00	24		3,229 76
For removing obstructions in the Berwick Branch of the Piscataqua River.						1830	1,930 00		\$9 54	1,930 00
						1831			24	
	July 3, 1832	4	552		250 00	1832	250 00			250 00
Total.					8,510 00		8,510 00	9 78		8,500 22
Portland Harbor.										
For erecting a breakwater on Stanford Ledge in Portland Harbor, according to the plan reported by John Anderson, of the Engineer Corps.	July 4, 1836	5	128	1	10,000 00	1836	10,000 00			10,000 00
	Mar. 3, 1837	5	188	1	25,000 00	1837	25,000 00			25,000 00
	July 7, 1838	5	269	1	25,365 00	1838	6,698 00			6,698 00
For continuing the breakwater on Stanford's Ledge, Portland Harbor, Maine.						1839	19,668 00			19,668 16
	June 23, 1866	14	71	1	105,111 05	1849		89 84		
						1857	3,900 00			3,900 00
For extending the breakwater at Portland Harbor.						1868	40,011 19	14,000 00		26,011 19
						1869	20,000 00			20,000 00
						1870	54,972 96			54,972 96
	July 11, 1870	16	225		10,000 00	1871	18,000 00			18,000 00
	Mar. 3, 1871	16	541		40,000 00	1871	32,000 00		121 71	18,000 00
	June 10, 1872	17	374	1	45,000 00	1872				32,000 00
	Mar. 3, 1873	17	565	1	50,000 00	1873	15,000 00			15,000 00
						1874	40,000 00			40,000 00
	June 23, 1874	18	241	1	20,000 00	1875	35,000 00			35,000 00
	Mar. 3, 1875	18	460	1	20,000 00	1876	1,000 00			1,000 00
						1877	2,000 00			2,000 00
						1878	1,000 00			1,000 00
						1880	1,000 00			1,000 00
						1881	15,000 00			15,000 00
	Mar. 3, 1881	21	489	1	20,000 00	1882	45,000 00			45,000 00
Total.					371,477 05		355,355 34	14,069 84	211 55	371,265 50
Richmond Harbor.										
For improving Richmond Harbor, Kennebec River, Maine; of which sum \$6,000 shall be expended for wing dams and dredging at the head of Swan's Island and at Hatch's Rock, and \$4,000 in dredging and deepening the channel at the foot of Swan's Island.	Mar. 3, 1881	21	481	1	10,000 00	1881	1,000 00			1,000 00
						1882	9,000 00			9,000 00
Total.					10,000 00		10,000 00			10,000 00

<i>Richmond Island Harbor.</i> For a breakwater at Richmond Island Harbor, Maine, and repairing the breakwater in Portland Harbor.....	Aug. 30, 1862	10	57	.....	10,000 00	1854	10,000 00	.....	154 77	.....	9,844 22
	.....	.....	.....	.....	.....	1856	.....	.....	1 01	.....	.....
	.....	.....	.....	.....	.....	1857	.....	.....	.....	155 78	.....
	June 10, 1872	17	374	1	20,000 00	1858	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	575	1	60,000 00	1873	15,000 00	.....	.....	.....	15,000 00
For the improvement of Richmond Island, Maine .....	.....	.....	.....	.....	.....	1874	65,000 00	.....	.....	.....	65,000 00
	Mar. 3, 1875	18	460	1	15,000 00	1875	8,000 00	.....	.....	.....	8,000 00
	.....	.....	.....	.....	.....	1876	7,000 00	.....	.....	.....	7,000 00
	June 18, 1878	20	158	.....	6,000 00	1879	6,000 00	.....	.....	.....	6,000 00
	Mar. 3, 1879	20	363	1	3,000 00	1880	3,000 00	.....	.....	.....	3,000 00
Total	June 14, 1880	21	180	1	3,000 00	1881	4,000 00	.....	.....	.....	4,000 00
	Mar. 3, 1881	21	468	1	3,000 00	1882	2,000 00	.....	.....	.....	2,000 00
	.....	.....	.....	.....	120,000 00	.....	120,000 00	155 78	155 78	.....	119,844 22

<i>Rockland Harbor.</i> For improving Rockland Harbor, Maine	June 14, 1880	21	186	1	20,000 00	1881	10,000 00	.....	.....	.....	10,000 00
	.....	.....	.....	.....	.....	1882	10,000 00	.....	.....	.....	10,000 00
	.....	.....	.....	.....	20,000 00	.....	20,000 00	.....	.....	.....	20,000 00

<i>Royals River.</i> For the improvement of Royals River, Maine	Mar. 3, 1871	16	541	1	10,000 00	1871	5,000 00	.....	.....	.....	5,000 00
	.....	.....	.....	.....	.....	1872	5,000 00	.....	.....	.....	5,000 00
	June 10, 1872	17	374	1	10,000 00	1873	10,000 00	.....	.....	.....	10,000 00
	.....	.....	.....	.....	20,000 00	.....	20,000 00	.....	.....	.....	20,000 00

<i>Saco Harbor.</i> For the erection of piers, placing beacons or buoys, and removing obstructions at and near the entrance into the harbor of Saco, in the State of Maine..... For continuing the repairs of the piers in Saco River.....	May 20, 1827	4	229	1	7,000 00	1827	4,450 00	.....	.....	.....	4,450 00
	.....	.....	.....	.....	.....	1828	2,550 00	.....	.....	.....	2,550 00
	June 23, 1866	14	73	1	40,000 00	1867	10,500 00	.....	.....	.....	10,500 00
	Mar. 2, 1867	14	420	1	40,000 00	1868	83,500 00	.....	16,015 94	.....	67,484 06
	.....	.....	.....	.....	.....	1869	1,900 00	.....	.....	.....	1,900 00
For improvement of Saco River, Maine.....	.....	.....	.....	.....	.....	1870	55 65	.....	.....	.....	55 66
	July 11, 1870	16	225	1	10,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1871	16	541	1	15,000 00	1871	20,058 21	.....	1 18	.....	20,057 03
	.....	.....	.....	.....	.....	1872	5,000 00	.....	.....	.....	5,000 00
	June 10, 1872	17	374	1	15,000 00	1873	10,000 00	.....	.....	.....	10,000 00
Total .....	.....	.....	.....	.....	.....	1874	5,000 00	.....	.....	.....	5,000 00
	.....	.....	.....	.....	.....	1877	.....	.....	.....	3 25	.....
	.....	.....	.....	.....	127,000 00	.....	143,013 87	16,017 12	16,017 12	.....	126,996 75

<i>Saint Croix River.</i> For the improvement of the navigation of the Saint Croix River, Maine, above the ledge..... For the improvement of Saint Croix River above the "ledge". For repairing breakwater on the Saint Croix River, near Calais.....	Mar. 2, 1867	14	420	1	15,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	565	1	10,000 00	1873	1,000 00	.....	.....	.....	1,000 00
	June 23, 1874	18	241	1	10,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1881	21	480	.....	4,000 00	1881	500 00	.....	.....	.....	500 00
	.....	.....	.....	.....	.....	1882	3,500 00	.....	.....	.....	3,500 00
Total .....	.....	.....	.....	.....	39,000 00	.....	5,000 00	.....	.....	.....	5,000 00

<i>Sullivan River.</i> For improvement of Sullivan River, Maine..... For the improvement of Sullivan River and Sullivan Falls.....	Mar. 3, 1871	16	541	.....	10,000 00	1871	10,000 00	.....	.....	.....	10,000 00
	June 10, 1872	17	374	1	25,000 00	1873	9,000 00	.....	.....	.....	9,000 00
	.....	.....	.....	.....	.....	1874	13,000 00	.....	.....	.....	13,000 00
	.....	.....	.....	.....	.....	1875	3,000 00	.....	.....	.....	3,000 00
	.....	.....	.....	.....	35,000 00	.....	35,000 00	.....	.....	.....	35,000 00

<i>Chesapeake Bay.</i> For a survey of the headwaters of Chesapeake Bay, pursuant to a resolution of the legislature of Maryland.....	July 4, 1836	5	130		500 00	1836 1840	500 00	14 44	14 44	485 56
Total					500 00		500 00	14 44	14 44	485 56
<i>Chester River.</i>										
For the improvement of Chester River at Kent Island Narrows, Maryland	Mar. 3, 1873	17	563	1	15,000 00	1875	10,000 00			10,000 00
	June 23, 1874	18	240	1	5,000 00	1876	10,000 00			10,000 00
	Aug. 14, 1876	19	136	1	5,000 00	1877	5,000 00			5,000 00
	June 18, 1878	20	132	1	3,000 00	1879	500 00			500 00
For improving Chester River from Spry's Landing to Crumpton Total	Mar. 3, 1881	21	474	1	6,500 00	1882	6,500 00	166 84	166 84	6,333 16
Balance					34,500 00		32,000 00	166 84		31,833 16
<i>Choptank River.</i> For improving Choptank River between Denton and Greens- borough, Maryland	June 14, 1880	21	190	1	5,000 00	1881	3,000 00			3,000 00
Total	Mar. 3, 1881	21	474	1	5,000 00	1882	7,000 00			7,000 00
					10,000 00		10,000 00			10,000 00
<i>Crisfield Harbor.</i> For the improvement of the harbor at Crisfield, Md.....	Mar. 3, 1875	18	457	1	37,317 50	1875 1876	12,317 50 25,000 00			12,317 50 25,000 00
Total					37,317 50		37,317 50			37,317 50
<i>Deal's Island Passage.</i> For improving water passage between Deal's Island and Little Deal's Island, Maryland	Mar. 3, 1881	21	474	1	5,000 00	1882	5,000 00			5,000 00
<i>Elk River.</i> For the improvement of Elk River, Maryland	June 23, 1874	18	240	1	5,000 00	1875	10,000 00			10,000 00
	Mar. 3, 1875	18	459	1	5,000 00	1881	10,000 00			10,000 00
	July 14, 1880	21	190	1	10,000 00	1882	5,000 00			5,000 00
Total	Mar. 3, 1881	21	474	1	5,000 00		25,000 00			25,000 00
<i>Leonardtown Harbor (Breton Bay).</i> For improving Breton Bay, Leonardtown, Md	July 13, 1878	20	139	1	5,000 00	1879	5,000 00			5,000 00
	Mar. 3, 1879	20	364	1	4,000 00	1880	4,000 00			4,000 00
	June 14, 1880	21	181	1	3,000 00	1881	3,000 00			3,000 00
Total	Mar. 3, 1881	21	470	1	3,000 00	1882	3,000 00			3,000 00
					15,000 00		15,000 00			15,000 00
<i>Northeast River.</i> For the improvement of Northeast River, Maryland.....	June 10, 1872	17	373	1	10,000 00	1873	10,000 00			10,000 00
	June 14, 1880	21	190	1	5,500 00	1881	5,500 00			5,500 00
Total					15,500 00		15,500 00			15,500 00
<i>Patapsco River.</i> For the improvement of the Patapsco River, Maryland, from Fort McHenry to the mouth of said river	Aug. 30, 1852	10	58		20,000 00	1854	2,500 00			2,500 00
To be expended, under the direction of the Secretary of War, in deepening the channel of the Patapsco River, and in ren- dering the part of Baltimore accessible to the steam frigates and other war vessels of the United States.....	Aug. 16, 1856	11	44		100,000 00	1857	57,000 00			57,000 00
For continuing improvement of Patapsco River.....	June 21, 1866	14	71	1	5,200 00	1868	43,000 00			43,000 00

* See "Surveys" post.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Patapsco River —Continued.										
For improvement of Patapsco River.....	Mar. 2, 1867	14	420	1	\$75,000 00	1867	\$30,200 00			\$30,200 00
						1868	51,500 00	\$2,007 77		49,492 23
						1870	34 93		\$472 84	34 93
						1872				
For widening and deepening the ship canal in the Patapsco River and Chesapeake Bay, leading toward the harbor of Baltimore.....	July 11, 1870	16	227	3	42,900 00	1871	22,000 00			22,000 00
For improvement of the ship-channel in the Patapsco River.....	Mar. 3, 1871	16	540	1	50,000 00	1872	40,900 00			40,900 00
and Chesapeake Bay, leading toward the harbor of Baltimore.....						1873	30,000 00			30,000 00
Total.....					293,100 00		294,634 93	2,007 77	472 84	292,627 16
Pocomoke River.										
For removing obstructions in Pocomoke River, Maryland.....	June 18, 1878	20	154		10,000 00	1879	5,000 00			5,000 00
						1880	5,000 00			5,000 00
Total.....					10,000 00		10,000 00			10,000 00
Queenstown Harbor.										
NOTE.—The act of March 3, 1879 (20 Statutes, 371), appropriated the sum of \$2,500 each for improving Cambridge Harbor and Pocomoke River. See "Cambridge Harbor," <i>ante</i> .										
For the improvement of Queenstown Harbor, Maryland.....	Mar. 3, 1871	16	540	1	5,000 00	1872	5,000 00			5,000 00
	June 10, 1872	17	373	1	6,000 00	1873	6,000 00			6,000 00
	Mar. 3, 1879	20	371	1	3,000 00	1880	3,000 00			3,000 00
Total.....					14,000 00		14,000 00			14,000 00
Saint Jerome's Creek.										
For improving the harbor at the entrance of Saint Jerome's Creek, Maryland.....	Mar. 3, 1881	21	482	1	6,500 00	1881	6,500 00			6,500 00
Secretary Creek.										
For improving Secretary Creek, Maryland.....	July 14, 1880	21	191	1	3,000 00	1881	3,000 00			3,000 00
	Mar. 3, 1881	21	474	1	3,000 00	1882	3,000 00			3,000 00
Total.....					6,000 00		6,000 00			6,000 00
Susquehanna River.										
For removing obstructions at the mouth of the Susquehanna River near Havre-de-Grace, Md.....	Aug. 30, 1852	10	58		10,000 00	1854	100 00			100 00
For improving channel of Susquehanna River, below Havre-de-Grace.....	June 23, 1866	14	71		26,400 00	1868	9,900 00			9,900 00
To deepen the harbor or waters at the mouth of the Susquehanna River.....	July 11, 1870	16	227		12,000 00	1870	30,500 00	4,500 00		26,000 00
For improving the channel of Susquehanna River above and below Havre-de-Grace, and to complete the work at the Fishing Battery light-station near Spesutia Island.....						1871	56 46			56 46
For improving Susquehanna River above and below Havre-de-Grace.....						1872	12,000 00			12,000 00
							343 54			343 54
Total.....							28,000 00			28,000 00
	June 14, 1880	21	189	1	28,000 00	1881				
	Mar. 3, 1881	21	481	1	15,000 00	1882	15,000 00			15,000 00
Total.....					91,400 00		95,900 00	4,500 00		91,400 00

<i>Treadhaven Creek.</i> For improving Treadhaven Creek, Maryland, for three miles below Easton.....	July 14, 1880 Mar. 3, 1881	21 21	190 474	1 1	3,000 00 3,000 00	1881 1882	3,000 00 3,000 00	..... .....	3,000 00 3,000 00
Total.....					6,000 00	.....	6,000 00	.....	6,000 00
<i>Wicomico River.</i>									
For the improvement of the Wicomico River, Maryland.....	June 10, 1872 Mar. 3, 1873 June 23, 1874 Mar. 3, 1875 Aug. 14, 1876	17 17 18 18 19	373 563 240 459 136	1 1 1 1 1	5,000 00 5,000 00 5,000 00 5,000 00 5,000 00	1873 1875 1877 1878 1879	5,000 00 15,000 00 3,000 00 2,000 00 5,000 00	..... ..... ..... ..... .....	5,000 00 15,000 00 3,000 00 2,000 00 5,000 00
For improving Wicomico River, below Salisbury.....	June 18, 1878 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 20 21 21	152 364 185 474	1 1 1 1	5,000 00 3,000 00 5,000 00 2,000 00	1879 1880 1881 1882	5,000 00 3,000 00 5,000 00 1,000 00	..... ..... ..... .....	5,000 00 3,000 00 5,000 00 1,000 00
Total.....					40,000 00	.....	39,000 00	.....	39,000 00
Balance .....						.....	1,000 00	.....
<i>Worton Harbor.</i> For the improvement of Worton Harbor, Maryland	June 10, 1872	17	373	1	12,000 00	1873	12,000 00	.....	12,000 00
<i>MASSACHUSETTS.</i>									
<i>Bass River.</i> To survey the harbor at Bass River, between Yarmouth and Dennis, to ascertain the practicability and expense of im- proving said harbor.....	Mar. 2, 1829	4	347	2	150 00	1829 1831	150 00	7	149 93
For the improvement of the harbor at the mouth of Bass River.	July 4, 1836 July 7, 1838	5 5	129 270	..... .....	10,000 41 10,000 00	1837 1838 1839 1840	8,370 00 3,285 00 7,187 00 1,158 41	..... ..... ..... .....	8,370 00 3,285 00 7,187 00 1,158 41
For continuing the improvement of the harbor at the mouth of Bass River, Massachusetts.....									
Total					20,150 41	.....	20,150 41	7	20,150 34
<i>Boston Harbor.</i> For the preservation of the islands in Boston Harbor neces- sary to the security of that place: <i>Provided, however, That</i> <i>the right of soil of said islands shall be first vested in the</i> <i>United States</i>	Mar. 2, 1825	4	92	.....	52,072 56	1825 1826 1827	10,907 29 32,950 00 9,115 27	..... ..... .....	10,907 29 32,950 00 9,115 27
For preservations of islands in Boston Harbor	Mar. 19, 1828 May 23, 1828	4 4	256 289	1 1	2,000 00 87,000 00	1828 1829 1830 1831	7,500 00 61,203 50 20,268 68 7,310 54	..... ..... ..... .....	7,500 00 61,203 50 20,268 68 7,260 68
For the preservation of Deer Island in Boston Harbor	Mar. 2, 1829	4	356	1	7,310 54	1830		49 86	
For completion of the sea-wall for the preservation of George's Island in Boston Harbor	Mar. 2, 1831 Feb. 24, 1832	4 4	450 498	..... .....	5,000 00 9,000 00	1831 1832 1834	5,049 86 8,780 00	..... ..... .....	5,049 86 8,779 40
For the preservation of George's Island, Boston Harbor								60	
For completing the sea-wall for the preservation of Deer Isl- and, Boston Harbor	Mar. 2, 1831 July 3, 1832	4 4	460 532	..... 1	12,390 00 60,000 00	1831 1832 1833 1834	12,390 00 11,890 00 40,200 00 6,780 00	..... ..... ..... .....	12,390 00 11,890 00 40,200 00 6,780 00
For the preservation of the islands in Boston Harbor	Mar. 1, 1835				1,130 00	1835	1,130 00	397 30	732 61
For repairs of sea-wall on Deer Island, Boston Harbor	Mar. 3, 1841	5	415	.....	1,500 00	1841	753 00	.....	753 00
For the preservation of Rainsford Island in the harbor of Bos- ton.....	Aug. 31, 1842 July 4, 1836	5 5	582 129	1	2,000 00 15,000 00	1844 1836 1837	2,747 00 9,410 00 5,590 00	..... ..... .....	2,747 00 9,410 00 5,590 00
For continuing the preservation of Rainsford Island.....	July 7, 1838	5	270	1	7,353 00	1838	6,500 00	.....	6,500 00
For repair of sea-wall on Rainsford Island, Boston Harbor.....	Mar. 3, 1841	5	415	.....	1,000 00	1843	6,703 00	.....	6,703 00
For sea-wall on Lovell's Island, Boston Harbor, for the said fiscal year	Mar. 3, 1843	5	608	1	16,000 00	1844 1847 1849 1860	100 00 13,000 00 1,500 00 1,309 23	..... ..... ..... .....	100 00 13,000 00 1,500 00 1,309 23
								130 77	130 77

<i>Duxbury Harbor.*</i> For the improvement of Duxbury Harbor, Massachusetts	June 10, 1872	17	375	1	10,000 00	1873	8,024 00			8,024 00
	Mar. 3, 1873	17	565	1	10,000 00	1874	11,976 00			11,976 00
	Total				20,000 00		20,000 00			20,000 00
<i>East Dennis Breakwater.</i> For a survey in reference to the construction of a breakwater at East Dennis, Barnstable Bay, Massachusetts	Aug. 30, 1852	10	57		1,500 00	1853	50 00	42 43		7 57
						1854				
						1855	1,492 43	1,492 43		
<i>Edgartown Harbor.</i> For making a survey of the flat on the northwest side of the harbor of Edgartown, to ascertain the practicability of build- ing a light-house thereon, and the utility of the same to nav- igation, and of preventing the said harbor from being filled up with sand	May 20, 1826	4	176	1	500 00	1826	500 00			500 00
	Mar. 2, 1829	4	347	2	2,500 00	1829	2,500 00			2,500 00
	June 10, 1872	17	375	1	20,000 00	1873	5,000 00			5,000 00
<i>Fall River Harbor.</i> For the improvement of Edgartown Harbor						1874	15,000 00			15,000 00
	Total				23,000 00		23,000 00			23,000 00
<i>Gloucester Harbor.</i> For the improvement of the harbor at Fall River, Mass	June 23, 1874	18	241	1	10,000 00	1875	10,000 00			10,000 00
	Mar. 3, 1875	18	460	1	10,000 00	1876	10,000 00			10,000 00
	Aug. 14, 1876	19	133	1	10,000 00	1878	10,000 00			10,000 00
<i>Gloucester Harbor.</i> For removing rock in Gloucester Harbor, Massachusetts					30,000 00		30,000 00			30,000 00
	June 10, 1872	17	374	1	10,000 00	1873	10,000 00	686 84		9,313 16
						1875	686 84			686 84
<i>Hyannis Harbor.</i> For improving Hyannis Harbor, Massachusetts	Mar. 2, 1827	4	228	1	10,650 00	1827	1,000 00			1,000 00
	Apr. 23, 1830	4	395	1		1828	8,000 00	27 00		7,973 00
	Mar. 2, 1831	4	460		6,517 82	1829	1,650 00			1,650 00
<i>Hyannis Harbor.</i> For completing the breakwater at Hyannis Harbor	July 3, 1832	4	552	1	7,600 00	1830	6,517 82			6,517 82
	Mar. 2, 1833	4	648	1	5,000 00	1831	7,680 00			7,680 00
	June 23, 1834	4	703		10,000 00	1832	3,540 00	140 10		3,399 90
<i>Hyannis Harbor.</i> For continuing the breakwater at Hyannis Harbor	Mar. 3, 1835	4	754		9,000 00	1833	9,920 10			9,920 10
	Mar. 3, 1837	5	188	1	5,000 00	1834	4,770 00			4,770 00
	July 7, 1838	5	269	1	8,764 00	1835	9,130 00			9,130 00
<i>Hyannis Harbor.</i> For repairing the breakwater at Hyannis Harbor	Aug. 30, 1852	10	57		5,000 00	1836	5,100 00			5,100 00
						1837	5,000 00			5,000 00
						1839	7,674 28			7,674 28
<i>Hyannis Harbor.</i> For improvement of Hyannis Harbor	July 11, 1870	16	225	1	12,000 00	1840	1,089 72			1,089 72
	Mar. 3, 1871	16	541	1	10,000 00	1853	500 00	47 24		500 00
	Mar. 3, 1873	17	565		10,000 00	1854	4,500 00			4,500 00
<i>Hyannis Harbor.</i> For improvement of Hyannis Harbor	June 23, 1874	18	241	1	5,000 00	1855	47 24			4,527 76
	June 15, 1878	20	138	1	3,000 00	1856		47 24		
						1871	12,000 00			12,000 00
						1872	10,000 00			10,000 00
						1874	10,000 00			10,000 00
						1875	5,000 00			5,000 00
						1879	3,000 00			3,000 00

* See "Light-House Establishment," *post*.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Hyannis Harbor</i> —Continued. For improving the harbor of Hyannis, of which \$500, or so much thereof as may be necessary, shall be expended in the removal of the wreck at that point..... For improving harbor at Hyannis; completing improvement..... Total.....	Mar. 3, 1879	20	363	1	\$2,500 00	1880	\$2,500 00			\$2,500 00
	Mar. 3, 1881	21	469	1	5,000 00	1882	5,000 00			5,000 00
					123,431 82		123,619 16	\$261 58	\$74 24	123,357 58
<i>Marblehead Harbor</i> . To ascertain the practicability and necessity of constructing a pier at the mouth of the harbor of Marblehead, Mass., for the security of shipping, and also a pier in the harbor of Holmes' Hole for the same object..... For the repair of the sea-wall at Marblehead..... Total.....	Mar. 3, 1825	4	135	2	400 00	1825				249 42
						1826		54 76		
						1827		95 82	150 58	
<i>Merrimac River</i> . For removing the sand bar at or near the mouth of Merrimac River, Massachusetts, by erecting piers or other works..... For completing the removal of the sand bar at or near the mouth of the Merrimac River..... For the repair and completion of the breakwater at the mouth of the Merrimac River..... For the completion of the breakwater at the mouth of the Merrimac River..... For the breakwater at the mouth of Merrimac River..... For improvement of Merrimac River..... For improvement of Merrimac River above Haverhill, Mass..... For the improvement of Merrimac River..... For continuing the improvements of the Merrimac River..... For the improvement of the Merrimac River..... For improving Merrimac River below Mitchell's Falls..... For improving Merrimac River..... For improving Merrimac River, continuing operations..... For improving Merrimac River..... Total.....	May 23, 1828	4	289	1	32,100 00	1829	32,100 00			32,100 00
	Apr. 23, 1830	4	395		3,505 72	1830	3,505 72			3,505 72
	Mar. 2, 1831	4	460		16,000 00	1831	11,500 00			11,500 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	Mar. 2, 1833	4	648		4,900 00	1833	2,500 00			2,500 00
	June 28, 1834	4	703		3,860 00	1835	4,000 00		900 00	4,000 00
	July 11, 1870	16	225		25,000 00	1836	3,860 00			3,860 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	Mar. 3, 1871	16	541		25,000 00	1871	32,000 00			32,000 00
	June 10, 1872	17	375	1	25,000 00	1872	18,000 00			18,000 00
	Mar. 3, 1873	17	565	1	25,000 00	1873	5,000 00			5,000 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	Mar. 3, 1874	18	241	1	10,000 00	1874	25,000 00			25,000 00
	Mar. 3, 1875	18	460	1	12,000 00	1875	47,474 82	15,474 82		32,000 00
						1876	5,000 00			5,000 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	June 18, 1878	20	158		10,000 00	1877	5,000 00			5,000 00
	Mar. 3, 1879	20	363		5,000 00	1879	10,000 00			10,000 00
	June 14, 1880	21	184		12,000 00	1880	5,000 00			5,000 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	Mar. 3, 1881	21	473		9,000 00	1881	14,000 00			14,000 00
						1882	7,000 00			7,000 00
					218,366 72		232,941 54	15,474 82	900 00	217,466 72
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	May 23, 1828	4	289		300 00	1828	300 00			299 37
	Mar. 2, 1829	4	347	2	30,000 00	1829	19,653 00	63		19,653 00
	Mar. 2, 1831	4	460		8,265 00	1830	10,347 00			10,347 00
<i>Nantucket Harbor</i> . For making a survey of the harbor of Nantucket, Massachusetts, and the passage leading to it, and an estimate of the cost of improving and making the harbor a good and secure one..... For removing the bar at the mouth of the harbor..... Total.....	July 3, 1832	4	552	1	6,000 00	1831	6,780 00			6,780 00
						1832	2,575 00			2,575 00
						1834			4,910 00	

To pay Samuel B. Tuck for 304½ chaldrons of Virginia coal delivered at Nantucket Harbor in 1832	June 15, 1844	6	916	412 12	1845	412 12	412 12	412 12
To pay George M. Jones a balance due for blacksmiths' work and materials for the use of the dredging-machine at Nantucket Harbor in 1832	June 15, 1844	6	916	320 89	1846	320 89	320 89	320 89
To pay Samuel B. Folger for blacksmiths' work and materials furnished for the public works at Nantucket Harbor in 1830-1832	June 15, 1844 June 14, 1880 Mar. 3, 1881	6 21 21	916 180 469	536 74 50,000 00 25,000 00	1846 1881	536 74 30,000 00	536 74 30,000 00	536 74 30,000 00
For improving Nantucket Harbor.								
Total				120,834 75		70,924 75	70,924 12	70,924 12
Balance						45,000 00		
<i>New Bedford Harbor.</i>								
For removing the wreck in the harbor of New Bedford, Mass.	July 4, 1836	5	129	1	1837	2,500 00		2,500 00
For removing the sand-bar occasioned by the wreck in the harbor of New Bedford	July 7, 1838	5	270		1838	1,809 00	155 73	1,653 27
					1839	5,881 37	1 00	5,881 37
	Mar. 3, 1875	18	461	1	1840			
	Aug. 14, 1876	19	133	1	1876	10,000 00		10,000 00
For the improvement of the harbor at New Bedford					1878	10,000 00		10,000 00
Total						30,190 37	155 73	30,034 64
<i>Newburyport Harbor.</i>								
For improving harbor at Newburyport, Mass.	June 14, 1880	21	184		1881	15,000 00		15,000 00
	Mar. 3, 1881	21	469		1882	25,000 00		25,000 00
Total						40,000 00		40,000 00
Balance						50,000 00		
<i>Plymouth Beach and Harbor.</i>								
For repair of Plymouth Beach in the State of Massachusetts, and thereby prevent the harbor at that place from being destroyed	May 26, 1824	4	38	1	1824	20,000 00		20,000 00
For completing the work to secure Plymouth Beach	Mar. 3, 1825	4	134	2	1825	5,712 00		5,712 00
For completing the repair of Plymouth Beach	Mar. 25, 1826	4	151	1	1826	11,000 00		11,000 00
For the preservation of Plymouth Beach					1827	2,184 90		2,184 90
For repairing Plymouth Beach	Apr. 23, 1830	4	395		1830	1,850 00		1,850 00
	Mar. 2, 1831	4	460		1831	2,820 00		2,820 00
	July 3, 1832	4	551	1	1832	2,500 00		2,500 00
	Mar. 2, 1833	4	648	1	1833	600 00		600 00
	June 28, 1834	4	703		1834	2,000 00		2,000 00
	Mar. 3, 1835	4	754		1835	700 00		700 00
For the preservation of Plymouth Beach								
For the continuation of the works for the preservation of Plymouth Beach	July 2, 1836	5	67		1836	500 00		500 00
For continuing the preservation of Plymouth Beach	July 7, 1838	5	270	1	1838	2,400 00		2,373 40
					1842		26 60	
	Aug. 31, 1852	10	57		1854	5,000 00	117 50	4,882 50
					1855	117 50	1 66	53 94
					1857			
					1858		1 66	
					1859		61 90	
	July 11, 1870	16	225					
	Mar. 3, 1871	16	541		1871	15,000 00		15,000 00
					1872	5,000 00		5,000 00
	June 10, 1872	17	375	1				
	Mar. 3, 1873	17	565	1	1873	2,500 00		2,500 00
					1874	3,000 00		3,000 00
	June 23, 1874	18	241	1				
	Mar. 3, 1875	18	460	1	1875	5,000 00		5,000 00
					1876	10,000 00		10,000 00
	June 18, 1878	20	158	1	1876	7,908 17	1,908 17	6,000 00
	Mar. 3, 1879	20	363	1	1877	9,000 00		9,000 00
					1879	4,000 00		4,000 00
For repair of harbor at Plymouth					1880	2,000 00		2,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Plymouth Beach and Harbor—Continued.</i>										
For improving harbor at Plymouth.....	June 14, 1880 Mar. 3, 1881	21 21	180 469	1 1	\$10,000 00 10,000 00	1881 1882	\$8,500 00 14,000 00	.....	.....	\$8,500 00 14,000 00
Total					126,266 90		128,292 57	\$2,115 83	\$90 16	126,176 74
<i>Provincetown Harbor.</i>										
For the preservation of the point of land forming Provincetown Harbor, Massachusetts.....	May 19, 1826 Mar. 2, 1829 Mar. 2, 1831	4 4 4	175 349 460	1	3,500 00 3,500 00 2,050 00	1825 1830 1831	2,300 00 3,154 36 4,456 23	.....	3,500 00	2,300 00 3,154 36 4,456 23
For further protection and preservation of the beach of Provincetown.....	Mar. 3, 1832 June 28, 1834 Mar. 3, 1835 July 2, 1836	4 4 4 5	551 703 754 67	1	4,600 00 4,400 00 4,400 00 4,400 00	1833 1835 1836 1837	4,456 23 4,763 76 4,614 00 4,061 65	.....	.....	4,763 76 4,614 00 4,061 65 4,358 48
For the continuation of the works for the preservation of the beach at Provincetown Harbor.....	July 7, 1838	5	270	.....	4,500 00	1840	4,358 48	141 52	141 52	4,358 48
For the preservation of Cape Cod Harbor, at and near Provincetown	Aug. 30, 1852	10	57	.....	5,000 00	1853	50 00	.....	.....	50 00
For preservation of Provincetown Harbor.....	June 23, 1866	14	71	.....	43,068 44	1867	3,550 00	.....	.....	3,550 00
For the preservation of the harbor of Provincetown, the same to be expended under the supervision of a board of officers to be appointed by the Secretary of War	July 28, 1866	14	323	.....	8,000 00	1868	1,564 13	164 13	23 35	1,376 05
For improvement of Provincetown Harbor	Mar. 3, 1871	16	541	.....	6,000 00	1871	239 77	60	.....	239 77
For the preservation of Provincetown Harbor	June 10, 1872	17	375	1	5,000 00	1872	4,028 67	.....	.....	4,028 67
For the preservation of Provincetown Harbor	Mar. 3, 1873	17	563	1	6,000 00	1873	9,800 00	.....	.....	9,800 00
For the preservation of Provincetown Harbor	June 23, 1874	18	242	1	6,000 00	1874	8,000 00	.....	.....	8,000 00
For the preservation of Provincetown Harbor	Mar. 3, 1875	18	460	1	5,000 00	1875	3,000 00	2,986 98	.....	3,000 00
For the preservation of Provincetown Harbor	Aug. 14, 1876	19	137	1	4,000 00	1876	10,986 98	.....	.....	10,986 98
For the preservation of Provincetown Harbor	June 18, 1878	20	158	1	1,000 00	1877	3,000 00	.....	.....	3,000 00
For the maintenance and annual repairs of the harbor at Provincetown	Mar. 3, 1879	20	363	1	1,000 00	1878	1,000 00	.....	.....	1,000 00
For improving harbor at Provincetown.....	June 14, 1880	21	180	1	500 00	1880	1,000 00	.....	.....	1,000 00
For improving harbor at Provincetown.....	Mar. 3, 1881	21	469	1	5,000 00	1881	1,500 00	.....	.....	1,500 00
Total.....					136,918 44	1882	4,000 00	.....	.....	4,000 00
<i>Salem Harbor.</i>										
For removing sand-bar forming at the entrance of Salem Harbor, Massachusetts.....	Mar. 3, 1873	17	565	1	15,000 00	1873	7,000 00	.....	.....	7,000 00
For removing sand-bar forming at the entrance of Salem Harbor, Massachusetts.....	June 23, 1874	18	241	1	10,000 00	1874	8,000 00	.....	.....	8,000 00
Total					25,000 00	1875	10,000 00	.....	.....	10,000 00

<i>Sandy Bay Breakwater.</i> For examining the piers erected at Sandy Bay, to report the condition of the same, and what works are necessary to make a good and safe harbor at that place, together with an estimate of the cost. For the construction of a breakwater at Sandy Bay, agreeably to the report of a survey made by direction of the Department of War, transmitted to Congress by the President, April 23, 1830. For continuing the breakwater at Sandy Bay.	Mar. 2, 1829	4	347	150 00	1829 1833	150 00	3 32	3 32	146 68	
	July 4, 1836	5	129	10,000 00	1836	10,000 00			10,000 00	
	Mar. 3, 1837	5	188	20,000 00	1837	20,000 00			20,000 00	
	July 7, 1838	5	269	20,000 00	1838	10,000 00			10,000 00	
					1839	10,000 00			10,000 00	
The act of February 13, 1845, directs the payment of such sum as shall be found equitably due to Gideon Batchelder and others, by the proper accounting officer, for any stone delivered in 1838 and 1839 towards the erection of Sandy Bay Breakwater, near Gloucester, Mass., under the inspection and by the assent of the public agent there at that time. The act of March 3, 1847, directs the payment of \$645.30 to Josiah Haskell, in full compensation for his services on Sandy Bay Breakwater.	Feb. 13, 1845	6	935	1,487 24 16,950 03	1845 1846	1,487 24 16,950 03			1,487 24 16,950 03	
	Mar. 3, 1847	9	696	645 30	1847	645 30			645 30	
	Total				69,232 57		69,232 57	3 32	3 32	69,229 25
	<i>Scituate Harbor.</i> For surveying North River, between Scituate and Marshfield, to ascertain the expediency of removing obstructions at the mouth of the same, and to make an estimate of the cost. For a survey in reference to the improvement of the harbor of Scituate in connection with the North River, Massachusetts. For improving Scituate Harbor.	Mar. 2, 1829	4	346	180 00	1829 1831	180 00	1 06	1 06	178 94
		Aug. 30, 1852	10	57	1,000 00	1854	1,000 00			912 04
June 14, 1880		21	190	7,500 00	1881	2,500 00	87 86	87 96	2,500 00	
Mar. 3, 1881		21	480	10,000 00	1882	15,000 00			15,000 00	
Total					18,680 00		18,680 00	89 02	89 02	18,590 98
<i>Taunton River.</i> For a survey of Taunton River and New Bedford Harbor, Massachusetts.	Aug. 30, 1852	10	59	3,000 00	1853	2,300 00			2,300 00	
					1854	700 00	89 09		610 91	
	July 11, 1870	16	225	10,000 00	1855	89 09		49 79	39 30	
	Mar. 3, 1871	16	541	10,000 00	1858		49 79	49 79		
	June 10, 1872	17	375	10,000 00	1871	10,000 00			10,000 00	
For the improvement of Taunton River	Mar. 3, 1873	17	565	10,000 00	1872	10,000 00			10,000 00	
	June 23, 1874	18	241	10,000 00	1873	10,000 00			10,000 00	
	Mar. 3, 1875	18	460	10,000 00	1874	10,000 00			10,000 00	
	June 18, 1878	20	139	2,000 00	1875	10,000 00			10,000 00	
	Mar. 3, 1879	20	363	1,000 00	1876	10,000 00			10,000 00	
Total	June 14, 1880	21	190	17,500 00	1879	2,000 00			2,000 00	
	Mar. 3, 1881	21	473	25,000 00	1880	1,000 00			1,000 00	
					1881	10,000 00			10,000 00	
					1882	7,500 00			7,500 00	
						83,589 09	138 88	49 79	83,450 21	
<i>Wareham Harbor.</i> For the improvement of Wareham Harbor, Massachusetts.	Balance						25,000 00			
	June 10, 1872	17	375	10,000 00	1873	5,000 00			5,000 00	
	Mar. 3, 1873	17	565	10,000 00	1874	15,000 00			15,000 00	
	June 23, 1874	18	241	10,000 00	1875	10,000 00			10,000 00	
	Mar. 3, 1875	18	460	10,000 00	1876	10,000 00			10,000 00	
Total	Mar. 3, 1881	21	480	10,000 00	1876	10,000 00			10,000 00	
					1882	10,000 00			10,000 00	
						50,000 00			50,000 00	

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Wellfleet Harbor.</i> For removal of rocks at entrance of Wellfleet Harbor, Massachusetts.....	June 10, 1872	17	375	1	\$5,000 00	1873	\$5,000 00			\$5,000 00
<i>Wood's Holl Harbor.</i> For the preservation of Great Wood's Holl Harbor, Massachusetts.....	Aug. 30, 1852	10	57		2,500 00	1853	710 00			710 00
						1854	1,790 00	\$17 24		1,772 76
						1855	17 24			
						1856		17 24	\$17 24	
For improving entrance to Wood's Holl Harbor, to secure a channel 200 feet wide and 10 feet deep.....	Mar. 3, 1879	20	371		15,000 00	1880	15,000 00			15,000 00
Total					17,500 00		17,517 24	34 48	17 24	17,482 76
MICHIGAN.										
<i>Alpena Harbor—Thunder Bay.</i> For the improvement of the harbor at Thunder Bay, Michigan.....	Aug. 14, 1876	19	136	1	4,500 00	1878	4,500 00	564 64		3,935 36
Total					4,500 00	1880	564 64			564 64
<i>Au Sable River.</i> For improving mouth of Au Sable River, Lake Huron.....	Mar. 2, 1867	14	419		50,000 00	1868	10,000 00			10,000 00
						1869	31,500 00			31,500 00
						1870	8,234 38			8,234 38
	July 11, 1870	16	224		15,000 00	1871	16,265 62			16,265 62
	Mar. 3, 1871	16	539		10,000 00	1872	9,000 00			9,000 00
						1873	5,019 50			5,019 50
For improvement of Au Sable River, Michigan.....	June 10, 1872	17	371	1	10,000 00	1874	4,980 50			4,980 50
	Aug. 3, 1876	19	136	1	1,000 00					
	Mar. 3, 1879	20	389	1	7,000 00					
	June 14, 1880	21	182		6,000 00					
For improving harbor and river at Au Sable	Mar. 3, 1881	21	471			1881	13,000 00			13,000 00
						1882	3,000 00			3,000 00
Total					106,000 00		106,000 00			106,000 00
<i>Belle River—Harbor of Refuge.</i> For removing bar at ice harbor of refuge at Belle River, Michigan.....	Mar. 3, 1881	21	472	1	7,000 00	1881	1,000 00			1,000 00
						1882	6,000 00			6,000 00
Total					7,000 00		7,000 00			7,000 00
<i>Black Lake Harbor.</i> For the preservation of Black Lake Harbor, Michigan.....	Aug. 30, 1852	10	58	1	8,000 00	1853	3,110 79			3,110 79
						1854	3,108 92			3,108 92
						1855	1,780 29			1,779 10
						1856		1 19	1 19	
	June 23, 1866	14	72		55,615 31					15,750 00
	Mar. 2, 1867	14	419		51,000 00	1867	15,750 00			15,750 00
						1868	42,500 00			42,500 00
						1869	41,000 00			41,000 00

For the improvement of Black Lake Harbor, Michigan.....	July 11, 1870	16	224	1	10,000 00	1870	7,341 22			7,341 22
	Mar. 3, 1871	16	539	1	10,000 00	1871	15,024 09			15,024 09
	June 10, 1872	17	371	1	10,000 00	1872	5,000 00			5,000 00
	Mar. 3, 1873	17	560	1	12,000 00	1873	10,000 00	7 35		9,992 65
	June 23, 1874	18	238	1	15,000 00	1874	12,000 00			12,000 00
	Mar. 3, 1875	18	456	1	15,000 00	1875	10,007 35			10,007 35
	Aug. 3, 1876	19	135	1	15,000 00	1876	18,000 00			18,000 00
	June 18, 1878	20	156	1	10,000 00	1877	7,000 00			7,000 00
	Mar. 3, 1879	20	369	1	6,000 00	1878	10,000 00			10,000 00
	June 14, 1880	21	182	1	6,000 00	1879	10,000 00			10,000 00
For continuing operations for completion of old project.....	Mar. 3, 1881	21	471	1	6,000 00	1880	6,000 00			6,000 00
	Aug. 14, 1876	19	136	1	10,000 00	1881	8,000 00			8,000 00
	June 18, 1878	20	156	1	12,000 00	1882	4,000 00			4,000 00
	Mar. 3, 1879	20	368	1	9,000 00					
	June 14, 1880	21	182	1	10,000 00					
	Mar. 3, 1881	21	471	1	10,000 00					
	Aug. 14, 1876	19	136	1	10,000 00					
	June 18, 1878	20	156	1	12,000 00					
	Mar. 3, 1879	20	368	1	9,000 00					
	June 14, 1880	21	182	1	10,000 00					
Total					220,615 31		220,622 66	8 54	1 19	220,614 12
<i>Charlevoix Harbor.</i>										
For the improvement of the harbor at Charlevoix, Michigan...	Aug. 14, 1876	19	136	1	10,000 00	1877	3,000 00			3,000 00
	June 18, 1878	20	156	1	12,000 00	1878	7,000 00			7,000 00
	Mar. 3, 1879	20	368	1	9,000 00	1879	12,000 00			12,000 00
	June 14, 1880	21	182	1	10,000 00	1880	9,000 00			9,000 00
	Mar. 3, 1881	21	471	1	10,000 00	1881	10,000 00			10,000 00
	Aug. 14, 1876	19	136	1	10,000 00	1882	10,000 00			10,000 00
	June 18, 1878	20	156	1	15,000 00					
	Mar. 3, 1879	20	368	1	15,000 00					
	June 14, 1880	21	182	1	15,000 00					
	Mar. 3, 1881	21	471	1	15,000 00					
Total					51,000 00		51,000 00			51,000 00
<i>Cheboygan Harbor.</i>										
For the improvement of Cheboygan Harbor, Michigan.....	Mar. 3, 1871	16	539	1	10,000 00	1871	1,000 00			1,000 00
	June 10, 1872	17	371	1	15,000 00	1872	9,000 00			9,000 00
	Mar. 3, 1873	17	560	1	15,000 00	1873	15,000 00			15,000 00
	June 23, 1874	18	238	1	15,000 00	1874	15,000 00			15,000 00
	Mar. 3, 1875	18	457	1	15,000 00	1875	15,000 00			15,000 00
	Aug. 3, 1876	19	136	1	10,000 00	1876	15,000 00			15,000 00
	June 18, 1878	20	156	1	8,000 00	1877	5,000 00			5,000 00
	Mar. 3, 1879	20	369	1	8,000 00	1878	5,000 00			5,000 00
	June 14, 1880	21	182	1	6,000 00	1879	8,000 00			8,000 00
	Mar. 3, 1881	21	471	1	6,000 00	1880	3,000 00			3,000 00
Total					103,000 00	1881	6,000 00			6,000 00
						1882	6,000 00			6,000 00
							103,000 00			103,000 00
<i>Clinton River.</i>										
For the improvement of the harbor at the mouth of Clinton River, Michigan.....	Aug. 30, 1852	10	58		5,000 00	1854	300 00			300 00
	July 11, 1870	16	224		5,000 00	1855	4,700 00	108 44		4,591 56
	Mar. 3, 1871	16	539		5,000 00	1857	108 44			108 44
	Mar. 3, 1881	21	472	1	1,500 00	1871	5,000 00			5,000 00
	June 23, 1874	18	238	1	8,000 00	1872	1,500 00			1,500 00
	Aug. 30, 1852	10	58		5,000 00	1881	4,000 00			4,000 00
	July 11, 1870	16	224		5,000 00	1882	4,000 00			4,000 00
	Mar. 3, 1871	16	539		1,500 00					
	Mar. 3, 1881	21	472	1	8,000 00					
	June 23, 1874	18	238	1	25,000 00					
Total					19,500 00		19,608 44	108 44		19,500 00
<i>Detroit River.</i>										
For removing bowlders and rock from the Detroit River, partly in Canadian waters.....	June 23, 1874	18	238	1	25,000 00	1875	4,000 00			4,000 00
	June 18, 1878	20	156	1	100,000 00	1877	21,000 00			21,000 00
	Mar. 3, 1879	20	369	1	50,000 00	1879	46,000 00			46,000 00
	June 14, 1880	21	189	1	50,000 00	1880	40,000 00			40,000 00
	Mar. 3, 1881	21	479	1	50,000 00	1881	75,000 00			75,000 00
	June 23, 1874	18	238	1	25,000 00	1882	89,000 00			89,000 00
	June 18, 1878	20	156	1	100,000 00					
	Mar. 3, 1879	20	369	1	50,000 00					
	June 14, 1880	21	189	1	50,000 00					
	Mar. 3, 1881	21	479	1	50,000 00					
Total					275,000 00		275,000 00			275,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Eagle Harbor.</i>										
For improving Eagle Harbor, Lake Superior.....	Mar. 2, 1867	14	419	1	\$65,000 00	1868	\$11,000 00			\$11,000 00
						1869	10,000 00			10,000 00
						1870	30,172 06			29,838 89
						1871	66 83			
For the improvement of Eagle Harbor, Michigan.....	Mar. 3, 1875	18	456	1	10,000 00	1872	15,000 00	\$400 00		15,000 00
						1875	10,000 00	5,276 51		4,723 49
	Aug. 3, 1876	19	133	1	12,000 00	1876	9,037 62			9,037 62
						1877	7,400 00			7,400 00
	June 18, 1878	20	155	1	8,000 00	1878	6,000 00			6,000 00
	Mar. 3, 1879	20	368	1	2,000 00	1879	500 00			500 00
Total					97,000 00		99,176 51	5,676 51		93,500 00
Balance									\$3,500 00	
<i>Frankfort Harbor (formerly Aux Bees Soies).</i>										
For improvement of harbor at Aux Bees Soies, Frankfort, Mich.	June 23, 1856	14	72	1	88,541 00					
	Mar. 2, 1867	14	419		10,000 00	1867	30,000 00			30,000 00
For improving harbor of Aux Bees Soies.....						1868	35,000 00			35,000 00
						1869	33,000 00			33,000 00
						1870	537 09			537 09
	July 11, 1870	16	223	1	10,000 00					
	Mar. 3, 1871	16	538	1	10,000 00	1871	10,003 91			10,003 91
						1872	10,000 00			10,000 00
For the improvement of Frankfort Harbor	June 10, 1872	17	370	1	10,000 00					
	Mar. 3, 1873	17	560	1	10,000 00	1873	5,000 00	7 97		4,992 03
						1874	10,000 00			10,000 00
	June 23, 1874	18	238	1	10,000 00					
	Mar. 3, 1875	18	456	1	10,000 00	1875	12,007 97			12,007 97
						1876	9,000 00			9,000 00
For improving harbor at Frankfort, to be expended in extending piers or dredging, at discretion of Secretary of War.....	Aug. 3, 1876	19	133	1	3,000 00	1877	4,000 00			4,000 00
						1878	3,000 00			3,000 00
	June 18, 1878	20	156	1	8,800 00	1879	6,800 00			6,800 00
	Mar. 3, 1879	20	368	1	4,000 00	1880	6,000 00			6,000 00
	June 14, 1880	21	184	1	5,000 00					
For improving harbor at Frankfort.....	Mar. 3, 1881	21	471	1	10,000 00	1881	6,000 00			6,000 00
						1882	9,000 00			9,000 00
Total					189,341 00		189,348 97	7 97		189,341 00
<i>Grand Haven Harbor.</i>										
For the preservation of the harbor at the mouth of Grand River, Michigan.....	Aug. 30, 1852	10	58	1	2,000 00	1853	200 00			200 00
						1854	101 00	28 00		73 00
						1855	1,727 00			1,105 39
						1856		621 61		
For the improvement of the harbor at Grand Haven	June 23, 1866	14	72	1	65,000 00					
	Mar. 2, 1867	14	419		40,000 00	1867	41,343 22	621 61		40,721 61
						1868	37,008 31			37,008 31
						1869	27,600 00			27,600 00
						1870	288 67			288 67

For the improvement of Grand Haven Harbor.....	July 11, 1870	16	224			10,000 00	1871	13,003 02			13,003 02
	Mar. 3, 1871	16	539			6,000 00	1872	3,000 00			3,000 00
	June 10, 1872	17	370	1		15,000 00	1873	15,000 00			15,000 00
	Mar. 3, 1873	17	560	1		75,000 00	1874	45,000 00			45,000 00
	June 23, 1874	18	238	1		50,000 00	1875	55,000 00			55,000 00
	Aug. 14, 1876	19	133	1		15,000 00	1876	22,000 00			22,000 00
	June 18, 1878	20	156	1		15,000 00	1877	10,000 00			10,000 00
	Mar. 3, 1879	20	369	1		9,000 00	1878	8,000 00			8,000 00
	June 14, 1880	21	182			50,000 00	1879	15,000 00			15,000 00
	Mar. 3, 1881	21	471			50,000 00	1881	20,000 00			20,000 00
Total						402,000 00	1882	50,000 00			50,000 00
Balance								373,271 22	1,271 22		372,000 00
<i>Grand Marais—Harbor of Refuge.</i>											
For construction of harbor of refuge at Grand Marais, Mich.	June 14, 1880	21	190	1		10,000 00	1881	2,500 00			2,500 00
	Mar. 3, 1881	21	471	1		20,000 00					
Total						30,000 00		2,500 00			2,500 00
Balance										27,500 00	
<i>Grand River.</i>											
For improving Grand River from its mouth to the city of Grand Rapids, Mich.	Mar. 3, 1881	21	472	1		10,000 00	1881	1,000 00			1,000 00
						20,000 00	1882	7,000 00			7,000 00
Total						10,000 00		8,000 00			8,000 00
Balance										2,000 00	
<i>Lake Huron—Harbor of Refuge.</i>											
For harbor of refuge, Lake Huron, Michigan	Mar. 3, 1871	16	539	1		100,000 00	1871	7,200 00			7,200 00
	June 10, 1872	17	371	1		100,000 00	1872	5,000 00			5,000 00
	Mar. 3, 1873	17	560	1		75,000 00	1873	20,000 00			20,000 00
	June 23, 1874	18	238	1		75,000 00	1874	20,302 25			20,302 25
	Mar. 3, 1875	18	457	1		100,000 00	1875	107,000 00	1,000 00		106,000 00
For the improvement of the harbor of refuge, Lake Huron, including the removal of the wreck of the City of Buffalo.	Aug. 3, 1876	19	137	1		75,000 00	1876	190,548 50			190,548 50
	June 18, 1878	20	156	1		100,000 00	1877	125,000 00			125,000 00
	Mar. 3, 1879	20	369	1		75,000 00	1878	50,949 25			50,949 25
	June 14, 1880	21	182	1		75,000 00	1879	60,000 00			60,000 00
	Mar. 3, 1881	21	471	1		50,000 00	1880	60,000 00			60,000 00
For harbor of refuge at Lake Huron							1881	65,000 00			65,000 00
Total						825,000 00	1882	85,000 00			85,000 00
Balance								796,000 00	1,000 00		795,000 00
<i>La Plaisance Bay.</i>											
For making a survey of La Plaisance Bay, to ascertain the expediency of improving the navigation thereof, and the expense of effecting the same.	May 20, 1826	4	176	1		200 00	1826	200 00			110 89
	Mar. 2, 1827	4	229				1827		89 11		
For completing a pier at the entrance of La Plaisance Bay	Mar. 3, 1829	4	363	1		3,977 81	1827	1,000 00			1,000 00
	Apr. 30, 1830	4	397			2,318 00	1829	2,977 81			2,977 81
For the building of piers at the entrance of La Plaisance Bay	July 3, 1832	4	553			89 11	1830	2,000 00			2,000 00
	June 28, 1834	4	703			8,000 00	1831	318 00	199 95		118 05
For completing the pier at La Plaisance Bay	July 2, 1836	5	69			4,895 00	1833	165 99			165 99
						323 15	1834	8,123 07			8,123 07
Total						19,803 07	1836	4,895 00	20 02		4,895 00
							1842	323 15	20 02		303 13
								20,003 02	300 08	109 13	19,693 94

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Ludington Harbor (formerly Pere Marquette).</i>	Mar. 2, 1867	14	421	1	\$50,000 00	1867	\$10,000 00			\$10,000 00
For improving harbor of Pere Marquette, Lake Michigan						1868	35,000 00			35,000 00
						1869	4,000 00			4,000 00
						1870	924 00			924 00
For the improvement of Pere Marquette Harbor, Michigan	July 11, 1870	16	224	1	10,000 00					
	Mar. 3, 1871	16	538	1	10,000 00	1871	10,075 40			10,075 40
						1872	10,000 00			10,000 00
	June 10, 1872	17	370	1	1,000 00	1873	10,000 00	\$0 90		9,239 10
	Mar. 3, 1873	17	560	1	25,000 00	1874	20,000 00			20,000 00
	June 23, 1874	18	238	1	20,000 00					
	Mar. 3, 1875	18	456	1	10,000 00	1875	23,000 00			23,000 00
						1876	10,000 00			10,000 00
For the improvement of Ludington Harbor, formerly Pere Marquette	Aug. 3, 1876	19	133	1	10,000 00	1877	4,000 00		\$0 90	4,000 00
						1878	8,000 00			8,000 00
	June 18, 1878	20	156	1	15,000 00	1879	13,000 00			13,000 00
	Mar. 3, 1879	20	369	1	5,000 00	1880	5,000 00			5,000 00
	June 14, 1880	21	182	1	8,000 00	1881	10,000 00			10,000 00
	Mar. 3, 1881	21	471	1	10,000 00	1882	10,000 00			10,000 00
Total					183,000 00		183,000 00	90	90	182,999 10
<i>Manistee Harbor.</i>	Mar. 2, 1867	14	419	1	60,000 00	1868	35,000 00			35,000 00
For improving harbor of Manistee, Michigan						1869	24,500 00			24,500 00
	July 11, 1870	16	224		20,000 00	1870	232 76			232 76
	Mar. 3, 1871	16	538		9,000 00	1871	20,237 24			20,237 24
						1872	9,000 00			9,000 00
	June 10, 1872	17	370	1	10,000 00	1873	5,000 00			5,000 00
	Mar. 3, 1873	17	560	1	10,000 00	1874	15,000 00	87		15,000 00
For the improvement of Manistee Harbor	June 23, 1874	18	238	1	10,000 00					
	Mar. 3, 1875	18	456	1	25,000 00	1875	10,000 87			10,000 87
						1876	18,000 00			18,000 00
	Aug. 3, 1876	19	133	1	14,000 00	1877	9,000 00			9,000 00
						1878	10,000 00			10,000 00
	June 18, 1878	20	156	1	15,000 00	1879	12,000 00			12,000 00
	Mar. 3, 1879	20	369	1	10,000 00	1880	4,000 00			4,000 00
	June 14, 1880	21	182		10,000 00	1881	11,000 00			11,000 00
	Mar. 3, 1881	21	471		10,000 00	1882	15,000 00			15,000 00
Total					203,000 00		203,000 87	87		203,000 00
<i>Manistique Harbor.</i>	June 14, 1860	21	183	1	5,000 00	1881	4,000 00			4,000 00
For improving Manistique Harbor, Michigan	Mar. 3, 1881	21	471	1	1,000 00					
Total					6,000 00		4,000 00			4,000 00
Balance									2,000 00	
<i>Marquette Harbor.</i>	Mar. 2, 1867	14	419	1	85,000 00	1868	35,000 00			35,000 00
						1869	20,000 00			20,000 00
						1870	29,633 22			29,633 22

For the improvement of Marquette Harbor Michigan	July 11, 1870	16	223	1	25,000 00	1871	573 07			573 07
	Mar. 3, 1871	16	538	1	60,000 00	1872	84,733 71			84,733 71
	June 10, 1872	17	370	1	50,000 00	1873	50,000 00			50,000 00
	Mar. 3, 1873	17	560	1	15,000 00	1874	15,000 00			15,000 00
	June 23, 1874	18	257	1	15,000 00	1875	15,000 00			15,000 00
	Mar. 3, 1875	18	456	1	15,000 00	1876	15,000 00			15,000 00
	Aug. 3, 1876	19	133	1	2,000 00	1877	2,000 00			2,000 00
	June 18, 1878	20	155	1	2,000 00					
	Mar. 3, 1879	20	368	1	1,500 00	1881	2,500 00			2,500 00
	June 14, 1880	21	182	1	1,000 00	1882	2,000 00			2,000 00
Total					271,500 00		271,500 00			271,500 00
<i>Menomonee Harbor.</i>										
Michigan and Wisconsin. See "Miscellaneous," <i>post</i> .										
<i>Monroe Harbor.</i>										
For the construction of a new entrance into the harbor at or near the mouth of the river Raisin, where it unites with Lake Erie, according to a plan and survey of the said works, made under the direction of the War Department by Capt. H. Smith, during the fall of 1834: <i>Provided, however</i> , That no part of the sum hereby appropriated shall be expended for improving the channel of said river, but the expenditure hereby directed shall be confined exclusively to the construction of a cut or passage from the lake to the part of the river which is to be used as a harbor for vessels.										
For the continuation of the works at the harbor near the mouth of the river Raisin, Michigan Territory	Feb. 24, 1835	4	752		30,000 00	1835	30,000 00			30,000 00
	July 2, 1836	5	68		15,000 00	1836	15,000 00			15,000 00
	Mar. 3, 1837	5	157	1	30,000 00	1837	28,500 00			28,500 00
	July 7, 1838	5	268	1	15,000 00	1838	9,000 00			9,000 00
						1839	7,500 00			7,480 29
	June 11, 1844	5	662		20,000 00	1842		19 71	19 71	
						1845	15,400 00			15,400 00
						1846	4,328 00			4,328 00
	Aug. 30, 1852	10	58	1	14,000 00	1847	272 00			272 00
						1853	500 00			500 00
For completing the improvement of the River Raisin Harbor.	June 23, 1856	14	72	1	31,015 27	1854	12,000 00			12,000 00
						1855	1,500 00			1,500 00
						1867	5,000 00			5,000 00
						1868	16,000 00			16,000 00
						1869	2,500 00			2,500 00
						1870	5,002 74			5,002 74
						1871	2,510 32			2,510 32
	June 10, 1872	17	371	1	10,000 00	1872		2 21	2 21	
	Mar. 3, 1873	17	561	1	15,000 00	1873	15,000 00			15,000 00
						1874	10,000 00			10,000 00
For improvement of the harbor at Monroe.	June 23, 1874	18	238	1	10,000 00					
	Mar. 3, 1875	18	457	1	10,000 00	1875	20,000 00			20,000 00
	Aug. 14, 1876	19	136	1	5,000 00	1877	5,000 00			5,000 00
	June 18, 1878	20	156	1	2,500 00	1879	2,500 00			2,500 00
	Mar. 3, 1879	20	369	1	2,000 00	1880	2,000 00			2,000 00
	June 14, 1880	21	183	1	2,000 00	1881	2,000 00			2,000 00
	Mar. 3, 1881	21	471	1	1,000 00	1882	1,000 00			1,000 00
Total					212,515 27		212,513 06	19 71	21 92	212,493 35
<i>Muskegon Harbor.</i>										
For improvement of Muskegon Harbor, Lake Michigan.	Mar. 2, 1867	14	419	1	59,000 00	1867	10,000 00			10,000 00
						1868	27,500 00			27,500 00
						1869	21,000 00			21,000 00
						1870	906 57			906 57
	July 11, 1870	16	224	1	10,000 00	1871	15,293 43			15,293 43
	Mar. 3, 1871	16	539	1	15,000 00	1872	10,000 00			10,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Muskegon Harbor—Continued.										
For the improvement of Muskegon Harbor, Michigan.....	June 10, 1872	17	370	1	\$10,000 00	1873	\$10,000 00			\$10,000 00
	June 23, 1874	18	238	1	10,000 00	1875	6,000 00			6,000 00
	Mar. 3, 1875	18	456	1	25,000 00	1876	22,000 00			22,000 00
	Aug. 3, 1876	19	133	1	15,000 00	1877	7,000 00			7,000 00
	Mar. 3, 1879	20	369	1	5,000 00	1878	12,000 00			12,000 00
	June 14, 1880	21	183	1	7,500 00	1879	2,000 00			2,000 00
	Mar. 3, 1881	21	471	1	20,000 00	1881	3,500 00			3,500 00
						1882	20,000 00			20,000 00
Total					176,500 00		176,500 00			176,500 00
New Buffalo Harbor.										
For the improvement of the harbor of New Buffalo, Michigan.	Aug. 30, 1852	10	58		8,000 00	1853	6,041 79			5,810 88
						1854	2,221 26	\$452 17		
						1855	9,159 12			1,940 66
For improving harbor of New Buffalo	Mar. 2, 1867	14	419	1	60,000 00	1866	248 46	248 46		248 46
						1868	33,500 00			33,500 00
						1869	20,000 00			20,000 00
						1870	2,070 92	55 60		2,015 32
For the improvement of New Buffalo Harbor	July 11, 1870	16	223	1	5,000 00	1871	9,484 68			9,484 68
	June 10, 1872	17	370	1	5,000 00	1881	1,500 00			1,500 00
						1882	3,500 00			3,500 00
Total					78,000 00		78,756 23	756 23		78,000 00
Ontonagon Harbor.										
For improving harbor of Ontonagon, Michigan	Mar. 2, 1867	14	420	1	97,600 00	1868	35,000 00			35,000 00
						1869	50,000 00			50,000 00
	July 11, 1870	16	223	1	10,000 00	1870	12,093 36			12,093 36
	June 23, 1874	18	237	1	23,000 00	1871	537 28			537 28
	Mar. 3, 1875	18	456	1	25,000 00	1872	9,909 46	82 41		9,827 05
For continuing the improvement of the harbor at Ontonagon.	Aug. 14, 1876	19	133	1	15,000 00	1875	22,000 00			22,000 00
	June 18, 1878	20	155	1	15,000 00	1876	18,000 00			18,000 00
						1877	14,082 41			14,082 41
						1878	9,000 00			9,000 00
						1879	15,000 00			15,000 00
For improving harbor at Ontonagon, Michigan; of which \$15,000 shall be expended in the construction of piers and \$2,000 in dredging	Mar. 3, 1879	20	368	1	17,000 00	1880	12,000 00			12,000 00
For continuing improvement, \$2,000 of which shall be expended in dredging	June 14, 1880	21	183	1	15,000 00	1881	19,000 00			19,000 00
For improving harbor at Ontonagon.....	Mar. 3, 1881	21	471	1	20,000 00	1882	21,000 00			21,000 00
Total					237,600 00		237,682 41	82 41		237,600 00
Pentwater Harbor.										
For improving harbor of Pentwater, Lake Michigan.....	Mar. 2, 1867	14	421	1	55,000 00	1868	35,000 00			35,000 00
						1869	19,500 00			19,500 00
						1870	495 66			495 66

[illegible]

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Saint Clair Flats and Canal—Continued.</i>										
For improvement of the Saint Clair Flats, in Michigan, to be expended in accordance with the plans and specifications of Col. T. J. Crum, in his report of December 10, 1866	Mar. 2, 1867	14	419	1	\$150,000 00	1867	\$500 00			\$500 00
						1868	20,000 00			20,000 00
						1869	151,800 00			151,800 00
						1870	57,416 71			57,416 71
For improvement of Saint Clair Flats	July 11, 1870	16	224	1	16,500 00					
	Mar. 3, 1871	16	539	1	1,500 00	1871	16,002 08			16,002 08
						1872	2,281 21			2,281 21
	June 10, 1872	17	371	1	4,000 00					
	Mar. 3, 1873	17	561	1	100,000 00	1873	54,000 00			54,000 00
						1874	2,346 03			2,346 03
For improvement of Saint Clair Flats Canal						1875	35,000 00			35,000 00
						1876	5,000 00			5,000 00
						1877	7,653 97			7,653 97
						1878	35 10	\$35 00		
For the improvement of Saint Clair Flats	June 18, 1878	20	156	1	5,000 00	1879	5,000 00			5,000 00
	Mar. 3, 1879	20	369	1	3,000 00	1880	3,000 00			3,000 00
For improving Saint Clair Flats, repairs of canal	June 14, 1880	21	189	1	2,500 00					
For operating and care of Saint Clair Flats Canal	Mar. 3, 1881	21	478	1	5,000 00	1881	7,500 00			7,500 00
	Mar. 3, 1881	21	478	1	4,889 60	1882	4,889 60			4,889 60
Total					437,359 60		437,595 59	206 23	\$0 24	437,389 36
<i>Saint Joseph's Harbor.</i>										
For the construction of a pier or breakwater at the mouth of the river Saint Joseph, Michigan	July 4, 1836	5	130	1	20,000 00	1836	20,000 00			20,000 00
	Mar. 3, 1837	5	187	1	15,000 00	1837	15,000 00			15,000 00
For continuing the construction of a pier or breakwater at the mouth of the river Saint Joseph	July 7, 1838	5	263	1	51,113 00	1838	25,556 50			25,556 50
						1839	25,556 50			25,556 50
For continuing the public works at the harbor of Saint Joseph	Mar. 3, 1843	5	619	1	10,000 00	1843	2,987 00			2,987 00
	Mar. 3, 1843	5	619	1	15,000 00					
	June 11, 1844	5	662		20,000 00	1844	15,726 00			15,726 00
						1845	18,490 00			18,490 00
						1846	7,797 00			7,797 00
For the further improvement of the harbor at Saint Joseph						1853	3,000 00			3,000 00
	Aug. 30, 1852	10	58		10,000 00	1854	5,860 00	347 88		5,512 12
For continuing the improvement of the harbor of Saint Joseph						1855	1,457 88			1,457 08
						1856		80	80	
	June 23, 1866	14	72		6,000 00					
	Mar. 2, 1867	14	419		23,000 00	1867	12,000 00			12,000 00
						1868	16,500 00	173 30		16,326 70
						1869	28 52			28 52
						1870	252 84			252 84
For the improvement of Saint Joseph's Harbor	July 11, 1870	16	224	1	15,000 00					
	Mar. 3, 1871	16	539		10,000 00	1871	10,391 94			10,391 94
						1872	15,000 00			15,000 00
	June 10, 1872	17	371	1	3,000 00	1873	3,000 00			3,000 00
	June 23, 1874	18	238	1	2,000 00					
	Mar. 3, 1875	18	461	1	35,000 00	1875	2,000 00			2,000 00
						1876	33,000 00			33,000 00
	Aug. 3, 1876	19	135	1	12,000 00	1877	5,500 00			5,500 00
						1878	7,500 00			7,500 00
For improving river and harbor at Saint Joseph	June 18, 1878	20	156	1	12,000 00	1879	13,000 00			13,000 00
	Mar. 3, 1879	20	369	1	6,000 00	1880	5,000 00			5,000 00

For improving river and harbor at Saint Joseph, including channel up to Benton Harbor	June 14, 1880 Mar. 3, 1881	21 21	183 471	1 1	8,000 00 10,000 00	1881 1882	9,000 00 10,000 00	283,112 20
Total					283,113 00		521 98	80
<i>Saint Mary's River and Saint Mary's Falls Canal.</i>								
Towards deepening the channel of the Saint Mary's River, in the State of Michigan, by the west channel through Lake George, according to the estimate of Captain Macomb, of the Topographical Corps, communicated to the Senate in the report of the Secretary of War, dated January 18, 1855	July 8, 1856	11	25		100,000 00	1857 1858 1859	1,000 00 49,000 00 50,000 00	1,000 00 49,000 00 50,000 00
For improvement of the Saint Mary's River, between Lake Superior and Lake Huron.....	June 23, 1866 Mar. 2, 1867	14 14	72 419		50,000 00 50,000 00	1867 1868 1869 1870	500 00 59,000 00 40,104 85 13 03	495 15 59,000 00 40,104 85 13 03
For improvement of Saint Mary's Falls Canal and Saint Mary's River	July 11, 1870 Mar. 3, 1871 Feb. 2, 1871	16 16 16	224 539 402	1 1 1	150,000 00 250,000 00 100,000 00	1871 1872	136,000 00 124,000 00	136,000 00 124,000 00
For the improvement of Saint Mary's River and Saint Mary's Falls Canal, of which \$15,000 may be applied to secure the right of way	June 10, 1872 Mar. 3, 1873 June 23, 1874	17 17 18	371 561 238	1 1 1	300,000 00 200,000 00 200,000 00	1873 1874	215,962 00 200,000 00	215,962 00 200,000 00
For the improvement of Saint Mary's Falls Canal	Mar. 3, 1875	18	456-7	1	200,000 00	1875 1876	180,000 00 160,000 00	180,000 00 160,000 00
For the improvement of Saint Mary's River and Saint Mary's Falls Canal	Aug. 3, 1876 June 18, 1878	19 20	136 156	1 1	130,000 00 175,000 00	1877 1878 1879	125,000 00 274,038 00 225,000 00	125,000 00 274,038 00 225,000 00
For the improvement of Saint Mary's River and Saint Mary's Falls Canal	Mar. 3, 1879	20	369	1	300,000 00	1880	200,000 00	200,000 00
For improving and operating Saint Mary's River and Saint Mary's Falls Canal; and the Secretary of War is hereby authorized to accept on behalf of the United States, from the State of Michigan, the Saint Mary's Canal and the public works thereon: <i>Provided</i> , Such transfers shall be so made as to leave the United States free from any and all debts, claims, or liability of any character whatsoever, and said canal, after such transfer, shall be free for public use: <i>And provided further</i> , That after such transfer the Secretary of War be, and hereby is, authorized to draw, from time to time, his warrant on the Secretary of the Treasury, to pay the actual expenses of operating and keeping said canal in repair	June 14, 1880 Mar. 3, 1881 Mar. 3, 1881	21 21 21	189 479 478	1 1 1	250,000 00 150,000 00 24,000 00	1881 1882 1882	330,000 00 175,000 00 24,000 00	330,000 00 175,000 00 24,000 00
For completing improvement					2,629,000 00		4 85	386 97
For operating and keeping in repair Saint Mary's Falls Canal.								60,000 00
Total								2,568,613 03
Balance								
<i>Saugatuck Harbor.</i>								
For the improvement of Saugatuck Harbor, Michigan	June 11, 1870 Mar. 3, 1871 June 10, 1872 Mar. 3, 1873 June 23, 1874 Mar. 3, 1875 Aug. 3, 1876	16 16 17 17 18 18 19	224 539 371 560 238 456 135	1 1 1 1 1 1 1	10,000 00 10,000 00 15,000 00 10,000 00 10,000 00 10,000 00 3,000 00	1871 1872 1873 1874 1875 1876 1877	15,000 00 5,000 00 5,000 00 15,000 00 9,000 00 16,000 00 3,000 00	15,000 00 5,000 00 5,000 00 15,000 00 9,000 00 16,000 00 3,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Sagautuck Harbor—Continued.</i>										
	June 18, 1878	20	156	1	\$2,500 00	1879	\$2,500 00			\$2,500 00
	Mar. 3, 1879	20	369	1	5,000 00	1880	5,000 00			5,000 00
	June 14, 1880	21	183	1	5,000 00	1881	3,000 00			3,000 00
	Mar. 3, 1881	21	471	1	5,000 00	1882	7,000 00			7,000 00
Total.....					85,500 00		85,500 00			85,500 00
<i>Sebawaing River.</i>										
	Mar. 3, 1875	18	461	1	8,000 00	1876	8,000 00			8,000 00
	June 14, 1880	21	192		7,000 00	1881	4,000 00			4,000 00
						1882	3,000 00			3,000 00
Total.....					15,000 00		15,000 00			15,000 00
<i>South Haven Harbor.</i>										
	Mar. 2, 1867	14	419	1	43,000 00	1868	32,000 00			32,000 00
						1869	10,700 00			10,700 00
	July 11, 1870	16	224			1870	293 31			293 31
	Mar. 3, 1871	16	539	1	10,000 00	1871	10,006 69			10,006 69
						1872	15,000 00			15,000 00
	June 10, 1872	17	371	1	12,000 00					
	Mar. 3, 1873	17	560	1	20,000 00	1873	12,000 00			12,000 00
						1874	20,000 00			20,000 00
	June 23, 1874	18	238	1	10,000 00					
	Mar. 3, 1875	18	456	1	10,000 00					
	Aug. 3, 1876	19	136	1	10,000 00	1875	6,000 00			6,000 00
						1876	14,000 00			14,000 00
						1877	5,000 00			5,000 00
						1878	5,000 00			5,000 00
	June 18, 1878	20	156	1	12,000 00	1879	10,000 00			10,000 00
	Mar. 3, 1879	20	369	1	7,500 00	1880	7,500 00			7,500 00
	June 14, 1880	21	183	1	5,000 00	1881	7,000 00			7,000 00
	Mar. 3, 1881	21	471	1	5,000 00	1882	5,000 00			5,000 00
Total.....					159,500 00		159,500 00			159,500 00
<i>White River Harbor.</i>										
	Mar. 2, 1867	14	419	1	57,000 00	1868	36,000 00			36,000 00
						1869	20,500 00			20,500 00
	July 11, 1870	16	224	1		1870	471 55			471 55
	Mar. 3, 1871	16	539	1	20,000 00					
						1871	30,028 45			30,028 45
	June 10, 1872	17	370	1	10,000 00	1872	10,334 00	\$334 00		10,000 00
	Mar. 3, 1873	17	560	1	7,000 00	1873	10,000 00	3 53		9,996 47
						1874	7,000 00			7,000 00
	June 23, 1874	18	238	1	10,000 00					
	Mar. 3, 1875	18	456	1	10,000 00	1875	5,003 53			5,003 53
						1876	13,000 00			13,000 00
	Aug. 3, 1876	19	133	1	5,000 00	1877	5,000 00			5,000 00
						1878	2,000 00			2,000 00
	June 18, 1878	20	156	1	12,000 00	1879	12,000 00			12,000 00
	Mar. 3, 1879	20	369	1	7,500 00	1880	6,500 00			6,500 00

	June 14, 1880	21	183	1	5,000 00	1851					8,000 00	
	Mar. 3, 1881	21	471	1	7,300 00	1852					5,500 00	
Total.....					171,000 00			171,337 53	337 53		171,000 00	
MINNESOTA.												
Duluth Harbor.												
For improvement of the harbor at Duluth, Minn.....	Mar. 3, 1871	16	541	1	60,000 00	1872		60,000 00			60,000 00	
For the improvement of Duluth Harbor, Minnesota: <i>Provided,</i>												
That no part of said sum shall be expended so as to injure the												
harbor of Superior City, Wis.....	June 10, 1872	17	370	1	50,000 00	1873		50,000 00			50,000 00	
For continuing the improvement of the entrance to the inner												
harbor of Duluth.....	June 23, 1874	18	237	1	10,000 00	1875		25,000 00			25,000 00	
	Mar. 3, 1875	18	456	1	35,000 00	1876		20,000 00			20,000 00	
	Aug. 14, 1876	19	133	1	15,000 00	1877		7,150 00			7,150 00	
For dredging the inside harbor at Duluth.....						1878		4,350 00			4,350 00	
	June 18, 1878	20	155	1	30,000 00	1879		33,500 00			33,500 00	
	Mar. 3, 1879	20	364	1	25,000 00	1880		20,000 00			20,000 00	
For continuing the improvement of harbor of Duluth.....	June 14, 1880	21	183	1	25,000 00	1881		30,000 00			30,000 00	
	Mar. 3, 1881	21	472	1	40,000 00	1882		40,003 00	3 00		40,000 00	
Total.....					290,000 00			290,003 00	3 00		290,000 00	
NOTE.—For the expenditure of an appropriation of \$100,000, per act of March 3, 1873 (17 Statutes, 569). "For the purpose of dredging out the bay of Superior from the natural entrance to the docks of Superior and Duluth, and preserving both entrances from the lake thereto." See "Superior Bay, Wisconsin," <i>post</i> .												
Grand Marais Harbor.												
For improving harbor at Grand Marais, Minn.....	Mar. 3, 1879	20	371	1	10,000 00	1880		8,000 00			8,000 00	
For continuing the improvement.....	June 14, 1880	21	183	1	10,000 00	1881		7,000 00			7,000 00	
	Mar. 3, 1881	21	472	1	20,000 00	1882		25,000 00			25,000 00	
Total.....					40,000 00			40,000 00			40,000 00	
Meeters Island, lock and dam.												
See "Mississippi River," <i>post</i> .												
Minnesota River.												
For removing snags and boulders throughout the Minnesota	Mar. 2, 1867	14	421	1	37,500 00	1867		5,000 00			5,000 00	
River.....						1868		25,000 00			25,000 00	
						1869		7,250 00			7,250 00	
						1870		91 21			91 21	
For the improvement of the Minnesota River.....	July 11, 1870	16	225	1	10,000 00	1871		10,021 32			10,021 32	
	Mar. 3, 1871	16	540	1	10,000 00	1872		10,137 47			10,137 47	
	June 10, 1872	17	372	1	10,000 00							
For the improvement of the Minnesota River, Minnesota: <i>Pro-</i>												
<i>vided,</i> That one-half of said sum shall be expended between	Mar. 3, 1873	17	562	1	10,000 00	1873		15,000 00			15,000 00	
the mouth of the Yellow Medicine and Minnesota Falls on						1874		5,000 00			5,000 00	
said river.....												
For the survey or improvement of the Minnesota River.....	June 23, 1874	18	239	1	10,000 00	1875		15,000 00			15,000 00	
	Mar. 3, 1875	18	458	1	10,000 00	1876		5,000 00			5,000 00	
For the improvement of the Minnesota River.....	Aug. 14, 1876	19	133	1	10,000 00	1877		5,000 00			5,000 00	
	June 18, 1878	20	154	1	10,000 00	1878		5,000 00			5,000 00	
						1879		10,000 00			10,000 00	
Total.....					117,500 00			117,500 00			117,500 00	
Mississippi River.												
Minnesota and Wisconsin. See "Miscellaneous," <i>post</i> .												
Red River of the North.												
Minnesota and Dakota. See "Miscellaneous," <i>post</i> .												
Saint Anthony's Falls.												
See "Mississippi River," <i>post</i> .												
Saint Croix River.												
Minnesota and Wisconsin. See "Miscellaneous," <i>post</i> .												

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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MISSISSIPPI.										
<i>Big Sunflower River.</i>	Mar. 3, 1879	20	370	1	\$20,000 00	1880	\$10,000 00			\$10,000 00
For improving Big Sunflower River, Mississippi	June 14, 1880	21	186	1	8,000 00					20,000 00
	Mar. 3, 1881	21	476	1	4,000 00	1881	20,000 00			2,000 00
Total					32,000 00		32,000 00			32,000 00
<i>Coldwater River.</i>	Mar. 3, 1879	20	370	1	7,000 00	1880	7,000 00			7,000 00
For improving Coldwater River, Mississippi	June 14, 1880	21	186	1	4,000 00	1881	3,000 00			3,000 00
						1882	1,000 00			1,000 00
Total					11,000 00		11,000 00			11,000 00
<i>Mississippi River.</i> Mississippi and Arkansas. See "Miscellaneous," <i>post</i> .	June 14, 1880	21	191	1	12,000 00					
<i>Noxubee River.</i> For improving Noxubee River, Mississippi	Mar. 3, 1881	21	476	1	8,000 00	1881	17,000 00			17,000 00
						1882	3,000 00			3,000 00
Total					20,000 00		20,000 00			20,000 00
<i>Pascagoula River.</i> For improving the harbor at the mouth of Pascagoula River, Mississippi, and for removing the obstructions to the navigation of said river	Mar. 2, 1827	4	229	1	8,000 00	1827	8,000 00			8,000 00
For deepening the channel at the mouth of Pascagoula River, in addition to the sum before appropriated for that object.	May 23, 1828	4	289		17,500 00	1830	1,600 00		\$15,900 00	1,600 00
	July 3, 1832	4	551		15,900 00	1832	2,000 00			2,000 00
						1833	3,000 00			3,000 00
For deepening the channel at Pascagoula River, being the balance of the appropriation of 1825, carried to the surplus fund the first of January, 1830.						1834	2,000 00	\$62 94		1,937 06
						1835	8,962 94			8,517 93
						1836	225 00			
						1838	42 56		42 56	
						1839	182 45		182 45	
						1844	220 00		220 00	
	Aug. 30, 1852	10	59		5,000 00	1853	1,000 00			620 22
						1855	4,014 10			
						1856	14 10			
						1858	11 00			
For a survey of East Pascagoula River, Mississippi						1859	4,368 78		4,368 78	
For improving Pascagoula River, and deepening the channel at its mouth.	June 18, 1878	20	156	1	10,000 00	1879	2,000 00			2,000 00
For improving Pascagoula River	Mar. 3, 1879	20	372	1	14,000 00					
	June 14, 1880	21	186	1	20,000 00	1881	20,000 00			20,000 00
	Mar. 3, 1881	21	476	1	4,000 00	1882	17,000 00			17,000 00
Total					94,400 00		78,802 04	5,125 83	20,724 79	73,675 21

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Gasconade River.</i>	June 14, 1880	21	191	1	\$5,000 00	1881	\$5,000 00			\$5,000 00
For improving Gasconade River, Missouri; removing snags .. {	Mar. 3, 1881	21	478	1	10,000 00	1882	10,000 00			10,000 00
Total					15,000 00		15,000 00			15,000 00
<i>Mississippi River.</i>										
Missouri and Illinois. See "Miscellaneous," post.										
<i>Mississippi and Missouri Rivers.</i>										
Missouri and Illinois. See "Miscellaneous," post.										
<i>Missouri River.</i>										
Missouri, Kansas, and Nebraska. See "Miscellaneous," post.										
<i>Osage River.</i>										
Missouri and Kansas. See "Miscellaneous," post.										
<i>Saint Louis Harbor.</i>										
Mississippi River. See "Miscellaneous," post.										
<i>White, Black, and Saint Francis Rivers.</i>										
Missouri and Arkansas. See "Miscellaneous," post.										
NEW HAMPSHIRE.										
<i>Cocheco River.</i>										
For deepening the channel of the Cocheco branch of the Piscat-	July 4, 1836	5	129	1	5,000 00	1836	2,500 00			2,500 00
aqua River, leading into Dover Harbor	Mar. 3, 1837	5	187	1	5,000 00	1837	3,800 00			3,800 00
For completing the channel of the Cocheco branch of the Pis-						1838	1,700 00			1,700 00
cataqua River, New Hampshire	Mar. 3, 1871	16	541	1	10,000 00	1871	5,000 00			5,000 00
	June 10, 1872	17	375	1	10,000 00	1872	5,000 00			5,000 00
	Mar. 3, 1873	17	565	1	10,000 00	1873	3,000 00			3,000 00
	June 23, 1874	18	241	1	10,000 00	1874	17,000 00			17,000 00
	Mar. 3, 1875	18	460	1	25,000 00	1875	16,000 00			16,000 00
For improvement of Cocheco River within the town of Dover. {						1876	19,000 00			19,000 00
	Aug. 14, 1876	19	134	1	14,000 00	1877	8,000 00			8,000 00
	June 18, 1878	20	158	1	6,000 00	1878	6,000 00			6,000 00
Total					95,000 00		95,000 00			95,000 00
<i>Exeter River.</i>										
For improving Exeter River, New Hampshire	June 14, 1880	21	183	1	20,000 00	1881	4,000 00			4,000 00
For improving Exeter River, \$15,000, of which not exceeding										
\$750 shall be available immediately, to be used in acquiring	Mar. 3, 1881	21	472	1	15,000 00	1882	31,000 00			31,000 00
title to land used in the cut-off at "Ox Bow"										
Total					35,000 00		35,000 00			35,000 00
<i>Lamprey River.</i>										
For improving Lamprey River, New Hampshire, below New {	Mar. 3, 1881	21	472	1	10,000 00	1881	1,000 00			1,000 00
Market						1882	9,000 00			9,000 00
Total					10,000 00		10,000 00			10,000 00

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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South River.										
For the improvement of South River, New Jersey	Mar. 3, 1871	16	538	1	\$15,000 00	1871	\$3,000 00			\$3,000 00
	Mar. 3, 1873	17	564	1	5,000 00	1872	12,000 00			12,000 00
	June 14, 1880	21	184	1	40,000 00	1874	3,000 00			3,000 00
	Mar. 3, 1881	21	470	1	6,000 00	1882	2,000 00			2,000 00
Total					66,000 00		1,000 00			1,000 00
Balance							21,000 00			21,000 00
<i>Tucker's Island.</i> See "Flat Beach," ante.									\$45,000 00	
Woodbridge Creek.										
For improving Woodbridge Creek, New Jersey	Mar. 3, 1879	20	370	1	4,000 00	1880	4,000 00			4,000 00
	June 14, 1880	21	184	1	5,000 00	1881	5,000 00			5,000 00
	Mar. 3, 1881	21	473	1	5,000 00	1882	5,258 27	\$258 27		5,000 00
Total					14,000 00		14,258 27	258 27		14,000 00
NEW YORK.										
Black River.										
For the improvement of the harbor at the mouth of Black River, in the county of Jefferson	July 4, 1836	5	129	1	5,000 00	1836	1,000 00			1,000 00
	Mar. 3, 1837	5	188	1	10,000 00	1837	14,000 00			14,000 00
	July 7, 1838	5	268	1	28,401 00	1838	11,200 50			11,200 50
For continuing the improvement of the harbor at the mouth of Black River, in Jefferson County, State of New York						1839	11,200 50	235 43	235 43	10,870 64
						1848		94 43	94 43	
For the removal of a sand-bar in the harbor at the mouth of Black River, \$5,000, or so much thereof as may be necessary.	Mar. 3, 1873	17	561	1	5,000 00	1873	400 00			400 00
						1874	4,600 00			4,600 00
Total					42,401 00		42,401 00	329 86	329 86	42,071 14
Black Rock Harbor.										
For extending the pier at Black Rock Harbor, at the outlet of Lake Erie, to a point opposite Bird's Island	Mar. 2, 1829	4	347	2	30,000 00	1829	30,000 00			30,000 00
For extending the pier at Black Rock	Apr. 23, 1830	4	395		3,198 00	1830	3,198 00			3,198 00
For arrearage due the superintendent of the works at Black Rock Harbor, New York	Mar. 2, 1831	4	460		1,800 00	1831	1,800 00			1,800 00
For the work at Black Rock Harbor	July 3, 1832	4	552	1	5,100 00	1832	2,502 27			2,502 27
						1833	2,600 00	2 27		2,597 73
For continuing the improvements of Black Rock Harbor	June 28, 1834	4	703		12,000 00	1834	5,000 00			5,000 00
						1835	7,000 00	495 85		6,504 15
						1836	495 85	3 00	3 00	492 85
Total					52,098 00		52,596 12	501 12	3 00	52,095 00
Buffalo Harbor.										
For building a pier and repairing the old one at the mouth of Buffalo Creek	May 20, 1826	4	175	1	15,000 00	1826	10,000 00			10,000 00
To complete a pier adjacent to a pier at Buffalo, in the State of New York	May 19, 1828	4	276	1	34,206 00	1828	5,000 00			5,000 00
						1829	25,000 00			25,000 00
						1829	9,206 00			9,206 00

For completing piers at Buffalo Harbor, New York.....	Apr. 23, 1830	4	395	1	15,488 00	1830	15,488 00	165 99	15,488 00	15,488 00
For completing the pier at the mouth of Buffalo Harbor.....	Mar. 2, 1831	4	460	1	12,900 00	1831	13,065 99	730 37	12,900 00	12,900 00
For completing the works at Buffalo	July 3, 1832	4	552	1	10,300 00	1832	10,300 00	622 43	10,300 00	9,569 63
	Mar. 2, 1833	4	648	1	31,700 00	1833	20,000 00	186 58	20,000 00	19,377 57
	June 23, 1834	4	703	1	20,000 00	1834	15,500 00	1,163 65	14,730 84	15,313 42
						1835	14,730 84	1,221 68	5,393 87	13,567 19
						1836	27,782 00			4,172 19
For continuing the works at Buffalo Harbor, and for erecting a mound or sea-wall along the peninsula which separates Lake Erie from Buffalo Creek to prevent the influx at the lake over said peninsula.....	July 7, 1838	5	270	1	20,500 00	1838	16,510 00	246 00	16,510 00	27,782 00
	July 7, 1838	5	270	1	48,000 00	1839	15,152 00	60 75	9,332 75	16,294 00
For continuation and enlargement of the present harbor at Buffalo.....	June 11, 1844	5	661	1	40,000 00	1845	10,700 00		10,700 00	15,091 25
For repairing the sea-wall at the harbor of Buffalo.....	Aug. 30, 1852	10	59	1	14,000 00	1846	29,300 00	349 05		10,700 00
For sea-wall at Buffalo Creek.....	Mar. 3, 1853	10	184	1	349 05	1853	3,320 00		349 05	28,950 95
						1854	5,963 00			3,320 00
						1855	5,066 05			5,963 00
To Isaac S. Smith, in full for his account for care and charge of the public property at the city of Buffalo, up to the 30th day of April, 1853, under the direction of the Topographical Bureau.....	Mar. 2, 1855	10	859	2	452 32	1855	452 32	43 62		5,066 05
For repairs and completion of sea-wall at Buffalo.....	July 2, 1864	13	354	1	37,500 00	1858	8,500 00		8,500 00	408 70
For completing the sea-wall at Buffalo Harbor.....	June 23, 1866	14	72	1	31,000 00	1860	29,000 00		29,000 00	43 62
	June 23, 1866	14	72	1	100,000 00	1865	8,000 00		8,000 00	8,500 00
	Mar. 2, 1867	14	420	1	100,000 00	1867	8,000 00		8,000 00	29,000 00
For improvement of Buffalo Harbor.....	July 11, 1870	16	224	1	80,000 00	1868	19,092 83	2 53	19,092 83	19,000 30
	Mar. 3, 1871	16	539	1	100,000 00	1869	117,000 00	467 85	116,532 15	116,532 15
For the improvement of Buffalo Harbor, and the unexpended balance heretofore appropriated for building sea-wall at Buffalo "reappropriated".....	June 10, 1872	17	371	1	75,000 00	1870	63,087 46		63,087 46	63,087 46
For the improvement of Buffalo Harbor.....	June 10, 1872	17	371	1	23,485 04	1871	128,040 96	1,145 91	128,040 96	120,895 05
For the purpose of dredging and protecting the navigable channel at the mouth of Buffalo River, and of removing the sand-bar formed by the great gale of December last at that point. Said sum to be available upon the passage of this act.....	Mar. 3, 1873	17	561	1	75,000 00	1872	60,000 00		23,485 04	60,000 00
For continuing the improvement of the harbor at Buffalo; and the Secretary of War is authorized to remove and prevent the accumulations of sand at the entrance to said harbor, provided the same can be done without expense or liability against the United States.....	Feb. 25, 1874	18	18	1	20,000 00	1873	128,485 04		128,485 04	128,485 04
For the improvement of the harbor at Buffalo, \$100,000; and out of this appropriation the Chief of Engineers may pay Daniel E. Bailey the sum of \$23,287.76 for work done by him upon such improvement in 1873 and 1874, and for which he has not been paid in full satisfaction thereof.....	June 23, 1874	18	238	1	75,000 00	1874	45,000 00		45,000 00	45,000 00
	Mar. 3, 1875	18	457	1	100,000 00	1875	133,287 76	1,000 00	132,287 76	132,287 76
						1876	42,712 24		42,712 24	42,712 24
For the improvement of the harbor at Buffalo.....	Aug. 14, 1876	19	132	1	85,000 00	1877	45,000 00		45,000 00	45,000 00
	June 18, 1878	20	157	1	80,000 00	1878	30,000 00		30,000 00	30,000 00
	Mar. 3, 1879	20	369	1	100,000 00	1879	35,000 00		35,000 00	35,000 00
	June 14, 1880	21	181	1	90,000 00	1880	65,000 00		65,000 00	65,000 00
	Mar. 3, 1881	21	469	1	90,000 00	1881	75,000 00		75,000 00	75,000 00
						1882	160,000 00		160,000 00	160,000 00
Total.....					1,524,880 41		1,464,089 98	7,376 41	33,166 84	1,436,713 57
Balance.....									35,000 00	
Buttermilk Channel.										
For improving Buttermilk Channel, New York.....	June 14, 1880	21	190	1	60,000 00	1881	46,500 00		46,500 00	46,500 00
	Mar. 3, 1881	21	473	1	60,000 00	1882	23,500 00		23,500 00	23,500 00
Total.....					120,000 00		70,000 00		70,000 00	70,000 00
Balance.....									50,000 00	

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Canarsie Bay.</i>										
For improving Canarsie Bay, New York	June 14, 1880 Mar. 3, 1881	21 21	186 480	1 1	\$10,000 00 5,000 00	1881	\$10,000 00			\$10,000 00
Total					15,000 00		10,000 00			10,000 00
Balance									\$5,000 00	
<i>Cattaraugus Creek.</i>										
For improving the harbor at the mouth of Cattaraugus Creek, on Lake Erie	July 4, 1836 Mar. 3, 1837 July 7, 1838	5 5 5	129 188 269	1 1 1	15,000 00 10,000 00 32,410 00	1836 1837 1838 1839 1840	11,990 82 13,009 18 14,137 00 16,276 00 1,997 00			11,990 82 13,009 18 14,137 00 16,276 00 1,997 00
For continuing the improvement of the harbor										
Total					57,410 00		57,410 00			57,410 00
<i>Charlotte Harbor.</i>										
For making a survey of Genesee River and harbor, New York, and estimates of the cost for improving the same	May 23, 1828 Mar. 2, 1829 Apr. 23, 1830	4 4 4	289 347 395	1 2 1	300 00 10,000 00 13,335 00	1828 1829 1830	300 00 10,000 00 13,335 00			300 00 10,000 00 13,335 00
For the improvement of the navigation of the Genesee River	Mar. 2, 1831 July 3, 1832 Mar. 2, 1833	4 4 4	459 552 648		16,670 00 16,000 00 15,000 00	1831 1832 1833	16,670 00 16,000 00 15,000 00	\$143 95	143 95	16,670 00 16,000 00 15,000 00
For improving the entrance of Genesee River	June 2, 1834 Mar. 3, 1835	4 4	703 754		20,000 00 2,390 00	1834 1835	20,000 00 2,390 00			20,000 00 2,390 00
For completing the works on the Genesee River on the present plan	July 2, 1836 Mar. 3, 1837	5 5	68 188		20,000 00 10,000 00	1836 1837	20,000 00 10,000 00			20,000 00 10,000 00
For continuing the works at the mouth of the Genesee River	July 3, 1837 July 7, 1838	5 5	268 268	1 1	25,000 00 25,000 00	1838 1839	25,000 00 12,500 00			25,000 00 12,500 00
For continuing the improvement of the channel at the mouth of Genesee River	June 11, 1844	5	661		10,000 00	1843 1845 1846 1847	130 76 6,023 00 2,977 00 1,000 00	45 31		12,369 24 5,977 66 2,977 00 1,000 00
For the further removal of obstructions at the mouth of Gen- esee River										
For continuing the removal of obstructions in the harbor at the mouth of the Genesee River, Lake Ontario	Aug. 30, 1852 Mar. 3, 1853	10 10	59 184	1	20,000 00 176 10	1853 1854 1855 1856 1859	4,288 00 14,740 00 372 00 176 10	176 10		4,288 00 14,740 00 372 00 176 10
For the improvement of Genesee River										
	June 23, 1866	14	72	1	75,607 30	1863 1867 1868 1869 1870	894 53 20 02 11,000 00 67,005 62 6,530 48	20 02	914 55	894 53 20 02 11,000 00 67,005 62 6,530 48
For the improvement of the harbor of Genesee River	July 11, 1870 Mar. 3, 1871	16 16	224 539	1 1	12,000 00 10,000 00	1871 1872 1873 1875 1876 1877	10,300 00 6,000 00 5,700 00 2,000 00 2,500 00 1,000 00			10,300 00 6,000 00 5,700 00 2,000 00 2,500 00 1,000 00
For the improvement of the harbor at Charlotte	June 18, 1878	20	157	1	1,000 00	1878				1,000 00

For improving harbor at Charlotte; repair of piers	Mar. 3, 1879	20	369	1	1,000 00	1880	1,000 00	.....	.....	.....	.....	1,000 00
	June 14, 1880	21	181	1	5,000 00	1881	5,000 00	.....	.....	.....	.....	5,000 00
	Mar. 3, 1881	21	469	1	2,500 00	1882	2,500 00	.....	.....	.....	.....	2,500 00
Total					290,978 40		299,942 07	10,234 60	1,270 93			289,707 47
<i>Delaware River.</i>												
New York and Pennsylvania. See "Miscellaneous," <i>post</i> .												
<i>Dunkirk Harbor.</i>												
For erecting a pier by contract at the mouth of Dunkirk Harbor, in the State of New York.....	Mar. 2, 1827	4	225	1	3,000 00	1827	3,000 00	.....	.....	.....	.....	3,000 00
For completing the erection of piers at the mouth of Dunkirk Harbor.....	May 19, 1828	4	275	1	6,000 00	1828	6,000 00	.....	.....	.....	.....	6,000 00
For securing and completing the works at the harbor of Dunkirk. For arrearage due for materials delivered to the works.....	Mar. 3, 1829	4	363	1	9,812 75	1829	9,812 75	.....	.....	.....	.....	9,812 75
For securing and completing the works at Dunkirk Harbor.....	Apr. 23, 1830	4	395	1	1,342 75	1830	1,342 75	.....	.....	.....	.....	1,342 75
For continuing the improvement at Dunkirk Harbor.....	Mar. 2, 1831	4	460	.....	6,400 00	1831	6,400 00	.....	.....	.....	.....	6,400 00
For continuing the improvement at Dunkirk Harbor.....	Mar. 2, 1831	4	460	.....	702 50	1831	702 50	.....	.....	.....	.....	702 50
For continuing the improvement at Dunkirk Harbor.....	July 3, 1832	4	552	1	10,200 00	1832	5,000 00	.....	.....	.....	.....	5,000 00
For continuing the improvement at Dunkirk Harbor.....	June 28, 1834	4	703	.....	4,000 00	1833	5,200 00	.....	.....	.....	.....	5,200 00
For continuing the improvement at Dunkirk Harbor.....	Mar. 3, 1835	4	754	.....	9,570 16	1834	4,000 00	.....	.....	.....	.....	4,000 00
For continuing the improvement at Dunkirk Harbor.....	Mar. 3, 1835	4	754	.....	1,418 27	1835	10,046 41	476 25	.....	.....	.....	9,570 16
For continuing the improvement at Dunkirk Harbor.....	July 2, 1836	5	68	.....	11,000 00	1836	8,458 18	516 89	.....	.....	.....	1,418 27
For continuing the improvement at Dunkirk Harbor.....	Mar. 3, 1837	5	188	1	15,000 00	1837	18,058 71	.....	.....	.....	.....	7,941 29
For continuing the improvement at Dunkirk Harbor.....	July 7, 1838	5	269	1	10,000 00	1838	9,500 00	.....	.....	.....	.....	18,058 71
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1839	200 00	.....	.....	.....	.....	9,500 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1840	300 00	.....	.....	.....	.....	200 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1847	2,873 93	.....	.....	.....	.....	300 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1848	2,126 07	.....	.....	.....	.....	2,873 93
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1853	267 91	.....	.....	.....	.....	2,126 07
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1854	1,421 31	.....	.....	.....	.....	267 91
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1855	28,310 78	.....	.....	.....	.....	1,421 31
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1861	158 68	.....	.....	.....	.....	28,310 78
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1862	158 68	.....	.....	.....	.....	158 68
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1863	100 53	.....	.....	.....	.....	100 53
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1866	25,500 00	.....	.....	.....	.....	25,500 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1869	43,000 00	.....	.....	.....	.....	43,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1870	31,418 94	.....	.....	.....	.....	31,418 94
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1871	37,081 06	.....	.....	.....	.....	37,081 06
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1872	13,000 00	.....	.....	.....	.....	13,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1873	35,000 00	.....	.....	.....	.....	35,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1874	40,000 00	.....	.....	.....	.....	40,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1875	8,132 95	.....	.....	.....	.....	8,132 95
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1876	50,000 00	.....	.....	.....	.....	50,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1877	5,000 00	.....	.....	.....	.....	5,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1878	17,500 00	.....	.....	.....	.....	17,500 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1879	15,500 00	.....	.....	.....	.....	15,500 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1881	2,000 00	4 00	.....	.....	.....	2,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1882	8,004 00	.....	.....	.....	.....	8,004 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1883	445,735 20	1,256 35	100 53	.....	.....	444,478 85
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1884	3,000 00	.....	.....	.....	.....	3,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1874	2,000 00	.....	.....	.....	.....	2,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1875	2,000 00	.....	.....	.....	.....	2,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1876	2,000 00	.....	.....	.....	.....	2,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1877	5,000 00	.....	.....	.....	.....	5,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1878	25,000 00	.....	.....	.....	.....	25,000 00
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1879	10,000 00	.....	.....	.....	.....	10,000 00
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1880	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1881	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1882	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1883	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1884	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1885	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1886	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1887	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1888	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1889	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1890	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1891	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1892	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1893	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1894	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1895	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1896	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1897	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1898	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1899	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1900	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1901	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1902	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1903	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1904	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1905	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1906	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1907	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1908	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1909	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1910	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1911	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1912	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1913	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1914	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1915	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1916	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1917	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1918	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1919	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1920	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1921	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1922	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1923	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1924	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1925	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1926	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	Aug. 30, 1852	10	59	.....	30,000 00	1927	.....	.....	.....	.....	.....	.....
For continuing the improvement at Dunkirk Harbor.....	June 11, 1844	5	661	.....	5,000 00	1928	.....	.....	.....	.....	.....	.....

<i>Great Sodus Bay.</i> For removing obstructions at the entrance of the harbor at Big Sodus Bay, on Lake Ontario	Mar. 2, 1829	4	347	2	12,500 00	1829	12,000 00		12,000 00
	Apr. 23, 1830	4	395		15,750 00	1830	15,750 00		15,750 00
	Mar. 2, 1831	4	460		17,450 00	1831	17,450 00		17,450 00
	July 3, 1832	4	552	1	17,000 00	1832	17,000 00		17,000 00
	Mar. 2, 1833	4	648	1	15,000 00	1833	15,000 00		15,000 00
	June 28, 1834	4	703		15,000 00	1834	15,000 00		15,000 00
	Mar. 3, 1835	4	754		11,790 00	1835	10,790 00		10,790 00
	July 2, 1836	5	67		12,600 00	1836	8,000 00		8,000 00
	Mar. 3, 1837	5	188	1	12,000 00	1837	17,600 00		17,600 00
	July 7, 1838	5	269	1	10,000 00	1838	10,000 00		10,000 00
For continuing the improvements at Big Sodus Bay	June 11, 1844	5	601		5,000 00	1845	4,045 34		4,045 34
	Aug. 30, 1852	10	59		10,000 00	1846	954 66		954 66
						1853	71 95		71 95
						1854	6,240 13		6,240 13
						1855	3,657 92		3,657 92
	Aug. 30, 1852	10	60		10,000 00	1853	4,958 95		4,958 95
						1854	4,224 13		4,224 13
						1855	816 92		816 92
						1858	3 53	\$20 42	3 53
						1860	16 89		16 89
For the improvement of the harbor of Sodus Bay.	June 23, 1866	14	72	1	53,151 80	1867	11,251 80		11,251 80
	Mar. 2, 1867	14	420	1	80,000 00	1868	66,000 00	6,000 00	60,000 00
						1869	54,500 00	656 53	53,843 47
						1870	8,029 33		8,029 33
	July 11, 1870	16	221		5,000 00	1871	5,027 20		5,027 20
	June 10, 1872	17	371	1	15,000 00	1873	15,000 00	55 84	14,944 16
	June 23, 1874	18	239	1	15,000 00				
	Mar. 3, 1875	18	458	1	10,000 00	1875	21,055 84		21,055 84
						1876	1,800 00		1,800 00
	Aug. 14, 1876	19	132	1	5,000 00	1877	4,200 00		4,200 00
For improving harbor of Big Sodus Bay						1878	3,000 00		3,000 00
	June 18, 1878	20	157	1	5,000 00				
	Mar. 3, 1879	20	369	1	2,000 00	1880	7,000 00		7,000 00
	June 14, 1880	21	181	1	3,000 00				
	Mar. 3, 1881	21	469	1	5,000 00	1882	8,000 00		8,000 00
Total					361,771 80		368,504 59	6,732 79	361,771 80
<i>Harlem River.</i> For the improvement of Harlem River, New York. For the improvement of Harlem River, but not to be available until the right of way for this work is secured to the United States free of cost. For improving Harlem River, \$100,000; but this appropriation is made subject to the provisions and limitations contained in the act of June 18, 1878, relating to said Harlem River improvement and the right of way therefor	Mar. 3, 1875	18	461	1	10,000 00	1876	10,000 00		10,000 00
	June 18, 1878	20	158	1	300,000 00				
	Mar. 3, 1879	20	372	1	100,000 00				
Total					410,000 00		10,000 00		10,000 00
Balance									400,000 00
<i>Hudson River.</i> For the improvement of the navigation of the Hudson River, New York, and the removal of obstructions therein, according to the plan submitted to the House of Representatives by the Department of War, under date of March 30, 1832. For continuing the improvement of the navigation of the Hudson River above and below Albany For continuing the improvement of the navigation of the Hudson River above and below Albany, and not above Troy	June 30, 1834	4	724		70,000 00	1834	1,000 00		1,000 00
						1835	69,048 37	48 37	69,000 00
	July 2, 1836	5	68		100,000 00	1836	100,000 00		100,000 00
	Mar. 3, 1837	5	189	1	100,000 00	1837	100,000 00		100,000 00
	July 7, 1838	5	269	1	100,000 00	1838	50,000 00		50,000 00
						1839	50,000 00	138 83	49,861 17
						1840	138 83		138 83
	Aug. 30, 1852	10	56		50,000 00	1853	1,000 00		1,000 00
						1854	12,347 86		12,347 86
						1855	36,652 14	59 00	36,593 14
Total									59 00

For improving Little Sodus Bay, continuing operations.....	June 14, 1880 Mar. 3, 1881	21 469	181 1	1 1	20,000 00 20,000 00	1882	40,000 00			40,000 00
Total.....					218,840 41		224,616 88	5,776 47		218,840 41
<i>Newtown Creek.</i>										
For improving Newtown Creek, New York.....	June 14, 1880	21	190	1	10,000 00	1881	10,000 00			10,000 00
<i>Niagara River.</i>										
For improving Niagara River, New York.....	Mar. 3, 1881	21	480	1	5,000 00	1881 1882	500 00 4,500 00			500 00 4,500 00
Total.....					5,000 00		5,000 00			5,000 00
<i>Oak Orchard Harbor.</i>										
For the improvement of the harbor at the mouth of Oak Orchard Creek, on Lake Ontario, according to the plan thereof made by Joseph G. Swift, civil engineer.....	July 4, 1836 Mar. 3, 1837 July 7, 1838 June 11, 1844	5 5 5 5	129 188 269 661	1 1 1 1	5,000 00 5,000 00 5,000 00 5,000 00	1836 1837 1838 1845 1846 1853 1854 1855 1858	3,600 00 6,400 00 5,000 00 4,000 00 1,000 00 2,898 73 6,610 39 990 88			3,600 00 6,400 00 5,000 00 4,000 00 1,000 00 2,898 73 6,610 39 990 88
For the continuation of the work at Oak Orchard Creek.....	Aug. 30, 1852	10	59		10,500 00	1853 1854 1855 1858	2,898 73 6,610 39 990 88			2,898 73 6,610 39 990 88
For continuing the improvement of the harbor of Oak Orchard Creek.....	Mar. 2, 1867	14	420	1	87,000 00	1868 1869 1870	33,500 00 22,000 00 45,220 72	8,000 00 5,850 43		23,500 00 16,149 57 45,220 72
	July 11, 1870 Mar. 3, 1871	16 16	224 539	1 1	8,000 00 10,000 00	1871 1872	5,055 98 9,500 00			5,055 98 9,500 00
	June 10, 1872 Mar. 3, 1873	17 17	371 561	1 1	2,500 00 10,000 00	1873 1874	5,400 00 10,673 73			5,400 00 10,673 73
	June 23, 1874 Mar. 3, 1875	18 18	239 457	1 1	10,000 00 10,000 00	1875 1876 1877 1880 1882	19,000 00 1,000 00 2,000 00 3,000 00 500 00			19,000 00 1,000 00 2,000 00 3,000 00 500 00
For the improvement of Oak Orchard Harbor, New York.....	Aug. 14, 1876 June 18, 1878 Mar. 3, 1879 June 14, 1880	19 20 20 21	132 157 369 181	1 1 1 1	2,000 00 2,000 00 1,000 00 500 00					
Total.....					173,500 00		187,379 60	13,879 60		173,500 00
<i>Ogdensburg Harbor.</i>										
For a survey of the harbor of Ogdensburg, New York, with reference to its improvement.....	Aug. 30, 1852	10	60		3,000 00	1854 1855 1862 1863 1868 1869 1870	75 00 2,925 00			75 00 2,010 45
	Mar. 2, 1867	14	420	1	40,000 00		7,500 00 20,000 00 13,888 37	894 53 20 02 4,000 00 2,772 49 29 18	914 55	3,500 00 17,227 51 13,859 19
	July 11, 1870 Mar. 3, 1871	16 16	224 539	1 1	15,000 00 26,000 00	1871 1872	21,020 58 16,500 00			21,020 58 16,500 00
	June 10, 1872 Mar. 3, 1873	17 17	371 561	1 1	10,000 00 6,000 00	1873 1874	20,800 00 3,092 72			20,800 00 3,092 72
	June 23, 1874 Mar. 3, 1875	18 18	239 458	1 1	6,000 00 5,000 00	1875 1876	8,000 00 3,000 00			8,000 00 3,000 00
For the improvement of Ogdensburg Harbor, New York.....					110,000 00		116,801 67	7,716 22	914 55	109,085 45

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Oleott Harbor.</i> For improving harbor at Oleott, New York, at mouth of Eighteen-Mile Creek.....	Mar. 2, 1867	14	420	.....	\$60,000 00	1868	\$31,000 00	\$10,000 00	.....	\$21,000 00
	.....	.....	.....	.....	.....	1869	17,539 54	.....	.....	17,539 54
	July 11, 1870	16	224	.....	.....	1870	21,385 64	.....	.....	21,385 64
	Mar. 3, 1871	16	539	.....	10,000 00	1871	11,915 74	.....	.....	11,915 74
	June 10, 1872	17	371	1	5,000 00	1872	3,159 08	.....	.....	3,159 08
	Mar. 3, 1873	17	561	1	10,000 00	1873	9,800 00	.....	.....	9,800 00
	.....	.....	.....	.....	10,000 00	1874	10,200 00	.....	.....	10,200 00
	June 23, 1874	18	239	1	10,000 00	1875	14,000 00	.....	.....	14,000 00
	Mar. 3, 1875	18	457	1	10,000 00	1876	2,000 00	.....	.....	2,000 00
	.....	.....	.....	.....	.....	1877	4,000 00	.....	.....	4,000 00
For the improvement of Oleott Harbor, New York.....	Mar. 3, 1881	21	469	1	3,000 00	1881	1,000 00	.....	.....	1,000 00
	.....	.....	.....	.....	.....	1882	2,000 00	.....	.....	2,000 00
	.....	.....	.....	.....	118,000 00	.....	128,000 00	10,000 00	.....	118,000 00

<i>Oswego Harbor.</i> For making a survey and examination of the southern shore of Lake Ontario, New York, between Genesee and Oswego Rivers, with a view to the improvement of the most accessible and commodious harbors on the frontier, by erecting piers or other works, and estimates of the costs of the same. For making a survey of Oswego Bay and Harbor, for ascertaining the expediency and expense of constructing piers to improve the navigation thereof..... For building two piers at the mouth of Oswego Harbor in the State of New York, \$33,348.64; no part of which last-mentioned sum shall be expended until a contract shall have been made for completing said piers, agreeably to the plan proposed in a report made under the act of the 20th of May last..... To complete the building of two piers at the mouth of Oswego Harbor, New York..... For repairing the damages sustained by the piers under construction at the mouth of Oswego River, from a severe gale in October last..... For completing piers at Oswego, New York..... For securing the works of Oswego Harbor, New York, by a stone pier-head and mole..... For claim of contractors for losses by storms in 1829..... For balance due contractors for said piers..... For completing the pier and mole at Oswego, N. Y..... For continuing and securing the works at Oswego Harbor..... For continuing the pier and mole at Oswego.....	May 23, 1828	4	289	1	400 00	1828	400 00	9 47	\$9 47	390 53
	.....	.....	.....	.....	.....	1830	.....	.....	.....	.....
	May 20, 1826	4	176	1	200 00	1826	200 00	.....	.....	200 00

	Mar. 2, 1827	4	228	1	33,348 64	1827	6,135 79	125 40	.....	6,010 39
	May 19, 1828	4	275	1	9,583 39	1828	14,715 23	.....	.....	14,715 23
	Mar. 3, 1829	4	363	1	7,472 00	1829	22,618 34	.....	.....	22,618 34
	.....	.....	.....	.....	.....	1830	7,059 97	.....	.....	7,059 97
	Mar. 2, 1831	4	460	.....	2,812 92	1831	2,662 33	.....	.....	2,662 33
	.....	.....	.....	.....	.....	1832	150 69	.....	.....	150 69
	Mar. 2, 1831	4	460	.....	18,600 00	.....	.....	.....	.....	.....
	Mar. 2, 1831	4	460	.....	519 00	.....	.....	.....	.....	.....
	Mar. 2, 1831	4	460	.....	84 92	1831	11,733 92	.....	.....	11,733 92
	July 3, 1832	4	552	1	19,000 00	1832	26,470 00	.....	.....	26,470 00
	Mar. 2, 1833	4	645	1	8,400 00	1833	8,592 00	192 00	.....	8,400 00
	June 28, 1834	4	703	.....	30,000 00	1834	7,640 00	.....	.....	7,640 00
	.....	.....	.....	.....	.....	1835	10,800 00	.....	.....	10,800 00
	July 2, 1836	5	68	.....	20,000 00	1836	19,260 00	.....	.....	19,260 00
	Mar. 3, 1837	5	188	1	15,000 00	1837	30,293 64	2,993 64	.....	27,300 00
	July 7, 1838	5	269	.....	46,067 00	1838	20,966 50	.....	.....	20,966 50
	.....	.....	.....	.....	.....	1839	25,100 50	1 55	.....	25,098 95
	.....	.....	.....	.....	.....	1840	.....	.....	1 55	.....

For the continuation of the works at the harbor of Oswego, Lake Ontario, State of New York	June 11, 1844	5	661	20,000 00	1845	8,000 00	160 31	8,000 00	8,000 00
	.....	.....	.....	.....	1846	9,000 00	4 59	9,000 00	9,000 00
	.....	.....	.....	.....	1847	2,000 00	.....	2,000 00	2,000 00
	.....	.....	.....	.....	1848	1,000 00	.....	1,000 00	1,000 00
	Aug. 30, 1852	10	59	40,000 00	1853	9,209 00	.....	9,209 00	9,209 00
	.....	.....	.....	.....	1854	13,862 92	.....	13,862 92	13,862 92
	.....	.....	.....	.....	1855	16,928 08	.....	16,928 08	16,928 08
	.....	.....	.....	.....	1856	.....	160 31	.....	.....
	.....	.....	.....	.....	1858	.....	4 59	.....	.....
	.....	.....	.....	.....	1859	.....	.....	.....	160 00
Transferred from "Repairs and incidental expenses of light- house at Oswego, New York."	.....	.....	.....	.....	1861	10,000 00	.....	10,000 00	10,000 00
	.....	.....	.....	.....	1862	20,000 00	711 64	2,500 00	1,788 36
	.....	.....	.....	.....	1863	.....	.....	.....	4,628 00
	.....	.....	.....	.....	1864	.....	.....	7,711 64	7,711 64
	.....	.....	.....	.....	1865	.....	.....	5,872 00	5,823 36
	.....	.....	.....	.....	1866	.....	48 64	.....	.....

For the improvement of Oswego Harbor, and preservation of the public works at that point	June 23, 1866	14	72	45,000 00	1867	43,200 00	2,000 00	41,200 00	41,200 00
	Mar. 2, 1867	14	420	60,000 00	1868	17,503 10	4,000 00	13,503 10	13,503 10
	.....	.....	.....	.....	1869	22,252 72	.....	22,252 72	22,252 72
	.....	.....	.....	.....	1870	22,758 03	.....	22,758 03	22,758 03

For improving harbor at Oswego	.....	.....	.....	.....	.....	.....	.....	.....	.....

For enlargement, according to the plan of the engineer depart- ment, of harbor facilities at Oswego, N. Y.	July 11, 1870	16	224	50,000 00	1871	56,178 55	.....	56,178 55	56,178 55
	Mar. 3, 1871	16	539	100,000 00	1872	61,500 00	.....	61,500 00	61,500 00

For improvement of Oswego Harbor, New York	.....	.....	.....	.....	.....	.....	.....	.....	.....

For enlargement and improvement, according to the plan and recommendation of the engineer department, of harbor facili- ties at Oswego, N. Y., including dredging entrance to harbor.	.....	.....	.....	.....	.....	.....	.....	.....	.....

Total	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Peconic River.</i>									
For the improvement of Peconic River below the village of Riverhead, Long Island, New York.	Mar. 3, 1871	16	540	5,000 00	1872	5,000 00	.....	5,000 00	5,000 00
	June 10, 1872	17	374	10,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	561	10,000 00	1873	10,000 00	.....	10,000 00	10,000 00
For the improvement of Peconic River, Long Island	.....	.....	.....	.....	1874	10,000 00	.....	10,000 00	10,000 00

Total	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Plattsburg Harbor.</i>									
For building a breakwater or pier at the harbor of Plattsburg, N. Y.	July 4, 1836	5	129	10,000 00	1836	2,200 00	.....	2,200 00	2,200 00
	Mar. 3, 1837	5	188	10,000 00	1837	17,800 00	.....	17,800 00	17,800 00
	July 7, 1838	5	269	27,500 00	1838	13,750 00	.....	13,750 00	13,750 00
For continuing the construction of a breakwater at Plattsburg	.....	.....	.....	.....	1839	13,750 00	.....	13,750 00	13,750 00

To pay Samuel Weller for materials furnished For the continuation of the breakwater structure at Platts- burg, on Lake Champlain	Mar. 3, 1843	6	898	2,680 01	1843	2,680 01	.....	2,680 01	2,680 01
	June 11, 1844	5	661	10,000 00	1845	8,690 43	.....	8,690 43	8,690 43
	.....	.....	.....	.....	1846	1,309 57	.....	1,309 57	1,309 57
For the improvement of Plattsburg Harbor	Mar. 2, 1867	14	420	26,000 00	1868	25,000 00	5,000 00	20,000 00	20,000 00
	.....	.....	.....	.....	1869	5,500 00	.....	5,500 00	5,500 00

For the improvement of Plattsburg Harbor	July 11, 1870	16	225	10,000 00	1870	7 17	.....	7 17	7 17
	Mar. 3, 1871	16	540	15,000 00	1871	8,000 00	.....	8,000 00	8,000 00
	June 10, 1872	17	371	10,000 00	1872	17,000 00	580 85	17,000 00	17,000 00
For the improvement of Plattsburg Harbor	Mar. 3, 1873	17	561	10,000 00	1873	11,073 68	.....	11,073 68	11,073 68
	.....	.....	.....	.....	1874	5,000 00	.....	5,000 00	5,000 00
	.....	.....	.....	.....	1875	10,000 00	.....	10,000 00	10,000 00
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditure.
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<i>Plattsburg Harbor—Continued.</i>										
For improving harbor at Plattsburg, for dredging	Mar. 3, 1879 June 14, 1880	20 21	364 181	1 1	\$2,000 00 1,000 00	1881 1882	\$3,000 00 1,772 33	\$1,772 33		\$3,000 00
Total					139,180 01		146,533 19	7,353 18		139,180 01
<i>Port Chester Harbor.</i>										
For the improvement and removal of rocks in Port Chester Harbor, New York.....	June 10, 1872	17	374	1	12,000 00	1873 1878	9,800 00 250 00			9,800 00 250 00
Total					12,000 00		10,050 00			10,050 00
Balance									\$1,950 00	
<i>Port Jefferson Harbor.</i>										
For a survey of the harbor of Port Jefferson, N. Y., with reference to the improvement thereof.....	Aug. 30, 1852	10	57		1,200 00	1853	100 00			100 00
	Mar. 3, 1871	16	539		13,000 00	1854 1871	1,100 00 1,000 00			1,100 00 1,000 00
	June 10, 1872	17	374	1	15,000 00	1872	14,000 00			14,000 00
	Mar. 3, 1875	18	460	1	15,000 00	1873	15,000 00			15,000 00
	Aug. 14, 1876	19	137	1	6,000 00	1876 1877	10,000 00 9,000 00			10,000 00 9,000 00
	June 18, 1878	20	159	1	8,000 00	1878	2,000 00			2,000 00
	Mar. 3, 1879	20	363	1	5,000 00	1879	8,000 00			8,000 00
	June 14, 1880	21	181	1	3,000 00	1880	5,000 00			5,000 00
	Mar. 3, 1881	21	469	1	4,000 00	1881 1882	3,000 00 4,000 00			3,000 00 4,000 00
Total					72,200 00		72,200 00			72,200 00
<i>Portland Harbor.</i>										
For the improvement of the harbor of Portland, on Lake Erie, New York	July 4, 1836	5	129	1	10,000 00	1836	7,818 54			7,818 54
	Mar. 3, 1837	5	188	1	10,000 00	1837	10,989 00			10,989 00
	July 7, 1838	5	269	1	35,466 00	1838	17,591 46			17,591 46
For continuing the improvement of the harbor of Portland.....						1839	18,386 00			18,386 00
	June 15, 1844	6	916		1,150 00	1840 1845	776 00 1,150 00	95 00		507 36 1,150 00
To pay Gervis Foote for stone delivered in 1838-1839						1846 1849 1855		82 76 90 88		
Total					56,616 00		56,711 00	263 64	173 64	56,442 36
<i>Port Ontario Harbor.</i>										
For the improvement of the harbor at the mouth of Salmon River, on Lake Ontario, according to the several plans of said harbor, submitted through the Department of War	July 4, 1836	5	129	1	5,000 00	1836	2,000 00			2,000 00
	Mar. 3, 1837	5	188	1	10,000 00	1837	13,000 00			13,000 00
	July 7, 1838	5	269	1	30,000 00	1838 1839	10,741 00 21,280 33			10,741 00 19,052 38
For continuing the improvement of the harbor of Salmon River, Lake Ontario, New York						1841		2,021 33 206 62		

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Sandy Hook Channel</i> —Continued. For removing the sunken wreck which now obstructs the channel way off Sandy Hook.....	July 8, 1873	17	406		\$15,000 00	1873	\$8,000 00		\$7,000 00	\$8,000 00
Total					116,530 00		142,183 20	\$63,300 00	37,646 80	78,883 20
<i>Sheepshead Bay.</i> For improving Sheepshead Bay, New York.....	June 14, 1880 Mar. 3, 1881	21 21	186 480	1 1	3,000 00 5,000 00	1882	1,000 00			1,000 00
Total					8,000 00		1,000 00			1,000 00
Balance									7,000 00	
<i>Staten Island Ice-breaker.</i> For building an ice-breaker on Staten Island, New York.....	July 4, 1836	5	130	1	19,500 00	1837 1838 1865 1866 1867 1869	10,000 00 9,500 00 995 55 995 55 6 55 17 80			10,000 00 8,504 45 977 75
Total					19,500 00		20,502 10	1,019 90	17 80	19,482 20
<i>Sumpawamus Inlet.</i> For improving Sumpawamus Inlet, New York.....	Mar. 3, 1881	21	482	1	5,000 00	1882	1,000 00			1,000 00
Balance									4,000 00	
<i>Ticonderoga River.</i> For improving Ticonderoga River, New York.....	Mar. 3, 1881	21	470	1	5,000 00	1882	5,000 00			5,000 00
<i>Waddington Harbor.</i> For the improvement of Waddington Harbor, New York.....	Mar. 3, 1873 June 23, 1874 Mar. 3, 1875 June 18, 1878 June 14, 1880 Mar. 3, 1881	17 18 18 20 21 21	561 239 461 155 191 470	1 1 1 1 1 1	10,000 00 10,000 00 5,000 00 5,000 00 3,000 00 35,500 00	1873 1874 1875 1876 1879 1880 1882	3,300 00 6,700 00 12,000 00 3,000 00 1,000 00 4,000 00 5,500 00			3,300 00 6,700 00 12,000 00 3,000 00 1,000 00 4,000 00 5,500 00
Total					35,500 00		35,500 00			35,500 00
<i>Whitehall Harbor.</i> For improving the entrance of Whitehall Harbor, on Lake Champlain.....	July 4, 1836	5	130	1	8,000 00	1836	5,500 00			5,500 00
For continuing the improvement of the harbor at Whitehall, in the State of New York.....	Mar. 3, 1837 July 7, 1838	5 5	188 268	1 1	10,000 00 15,000 00	1837 1838 1839	12,500 00 6,500 00 8,500 00			12,500 00 6,500 00 8,500 00
Total					33,000 00		33,000 00			33,000 00

Wilson Harbor.									
For the improvement of the harbor at Wilson, New York.....	Mar. 3, 1875	18	461	1	10,000 00	1875	6,000 00	.....	6,000 00
	Aug. 14, 1876	19	132	.....	10,000 00	1876	4,000 00	.....	4,000 00
	June 14, 1880	21	191	1	10,000 00	1878	8,000 00	.....	8,000 00
	Mar. 3, 1881	21	470	1	10,000 00	1881	3,000 00	.....	3,000 00
Total.....					40,000 00	1882	17,000 00	.....	17,000 00
NORTH CAROLINA.									
Beaufort Harbor.*	July 4, 1836	5	130	1	5,000 00	1837	5,000 00	.....	5,000 00
	Mar. 3, 1881	21	475	1	30,000 00	1882	10,000 00	.....	10,000 00
For improving Beaufort Harbor, North Carolina.....					35,000 00		15,000 00	.....	15,000 00
Total.....								20,000 00	
Balance.....									
Cape Fear River.	Mar. 2, 1829	4	347	2	20,000 00	1829	6,760 00	.....	6,760 00
	Apr. 23, 1830	4	395	.....	25,688 00	1830	32,500 00	.....	32,500 00
	Mar. 2, 1831	4	460	.....	25,705 00	1831	22,665 00	.....	22,665 00
	July 2, 1832	4	552	1	28,000 00	1832	28,880 00	.....	28,880 00
	Mar. 2, 1833	4	648	1	28,000 00	1833	17,488 00	.....	17,488 00
	June 28, 1834	4	703	.....	5,234 00	1834	24,334 00	.....	24,334 00
	Mar. 3, 1835	4	754	.....	20,000 00	1835	12,000 00	.....	12,000 00
	July 2, 1836	5	68	.....	20,000 00	1836	20,800 00	.....	20,800 00
	Mar. 3, 1837	5	190	1	10,000 00	1837	13,900 00	.....	13,900 00
	July 7, 1838	5	269	1	20,000 00	1838	11,062 99	.....	11,062 99
For improving the navigation of Cape Fear River, between the town of Wilmington and the mouth of said river.....						1839	14,000 00	.....	14,000 00
						1841		24 33	24 33
For a deficiency of former appropriations for the improvement of Cape Fear River.....	Mar. 2, 1847	9	152	2	601 92	1847	601 92	.....	601 92
For improvement of Cape Fear River at and below Wilmington.....	Aug. 30, 1852	10	60	.....	20,000 00	1853	3,000 00	.....	3,000 00
	July 22, 1854	10	307	.....	140,000 00	1854	17,000 00	.....	17,000 00
						1855	55,000 00	.....	55,000 00
						1856	50,000 00	.....	50,000 00
						1857	29,000 00	.....	29,000 00
For the improvement of Cape Fear River at or near its communication with the ocean.....						1858	3,017 46	17 46	17 46
						1859	98 78	20	20
						1861		795 65	795 65
						1862		6 67	6 67
For improvement of the channel of the mouth of Cape Fear River.....	July 11, 1870	16	226	1	100,000 00			.....	.....
	Mar. 3, 1871	16	540	1	75,000 00	1871	100,000 00	.....	100,000 00
	June 10, 1872	17	373	1	100,000 00	1872	75,000 00	.....	75,000 00
	Mar. 3, 1873	17	564	1	100,000 00	1873	100,000 00	.....	100,000 00
	June 23, 1874	18	240	1	150,000 00	1874	100,000 00	.....	100,000 00
	Mar. 3, 1875	18	459	1	150,000 00	1875	70,000 00	.....	70,000 00
For the improvement of Cape Fear River below Wilmington.....	Aug. 14, 1876	19	134	1	132,500 00	1876	230,000 00	.....	230,000 00
	June 18, 1878					1877	50,000 00	.....	50,000 00
	Mar. 3, 1879	20	364	1	160,000 00	1878	82,500 00	.....	82,500 00
	June 14, 1880	21	185	1	100,000 00	1879	135,000 00	.....	135,000 00
	Mar. 3, 1881	21	475	1	70,000 00	1880	110,000 00	.....	110,000 00
					140,000 00	1881	85,000 00	.....	85,000 00
For continuing the improvement of Cape Fear River.....								.....	.....
For improving Cape Fear River from the ocean to Fayetteville, \$30,000: <i>Provided</i> , That the Secretary of War is directed to expend of the money hereby appropriated, a sum not exceeding \$10,000, to extinguish any claim of right held by any company or corporation to take tolls or make charges for the navigation of so much of said river as is above described: <i>And provided further</i> , That said claim of right shall be extinguished and released on or before the 1st day of December, 1881, and								.....	.....

* See "Surveys," *post.*

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Cape Fear River</i> —Continued. Improvement of said river until such claim of right is wholly extinguished and released: <i>Provided further</i> , That nothing herein contained shall be taken or held as a waiver on the part of the United States to the exclusive control of navigation of said river relieved from any charges or tolls imposed by any company or corporation	Mar. 3, 1881	21	475	1	\$30,000 00	1882	\$100,000 00			\$100,000 00
					1,670,728 92		1,599,608 15	\$2,607 30	\$3,728 07	1,597,000 85
	Total								70,000 00	
Balance										
<i>Contentina Creek.</i> For improving Contentina Creek, North Carolina	Mar. 3, 1881	21	475	1	10,000 00	1882	10,000 00			10,000 00
<i>Croatan Sound.*</i> For reopening a communication between Albemarle Sound and the Atlantic Ocean, by the construction of a breakwater across Croatan Sound	Aug. 30, 1852	10	58		50,000 00	1853	300 00			300 00
						1856	29,000 00			29,000 00
						1857	9,000 00			8,788 89
						1858	3,310 28		8,389 72	
						1861		3,521 39	3,521 39	
						1863				
Total					50,000 00		41,610 28	3,521 39	11,911 11	38,088 89
<i>Currituck Sound.</i> For continuing the improvement of Currituck Sound and North River Bar, North Carolina	June 18, 1878	20	158	1	20,000 00	1879	20,000 00			20,000 00
	Mar. 3, 1879	20	372	1	25,000 00	1880	10,000 00			10,000 00
	June 14, 1880	21	185	1	25,000 00	1881	40,000 00			40,000 00
	Mar. 3, 1881	21	475	1	30,000 00	1882	31,731 59	1,731 59		30,000 00
Total					100,000 00		101,731 59	1,731 59		100,000 00
<i>Dan River.</i> North Carolina and Virginia. See "Miscellaneous," post.										
<i>Edenton Harbor.</i> For improving harbor at Edenton, N. C.	June 18, 1878	20	158	1	4,000 00	1879	4,000 00			4,000 00
	Mar. 3, 1879	20	365	1	1,000 00	1880	1,000 00			1,000 00
Total					5,000 00		5,000 00			5,000 00
<i>French Broad River.</i> North Carolina and Tennessee. See "Miscellaneous," post.										
<i>Lillington River.</i> For improving Lillington River, North Carolina	Mar. 3, 1881	21	475	1	3,000 00					
Balance									3,000 00	
<i>Neuse River.</i> For improving Neuse River, North Carolina	June 18, 1878	20	158	1	40,000 00	1879	40,000 00			40,000 00
	Mar. 3, 1879	20	365	1	45,000 00	1880	30,000 00			30,000 00

For improving Neuse River, from its mouth to the head of navigation	June 14, 1880 Mar. 3, 1881	21 475	185 1	1 1	45,000 00 30,000 00	1881 1882	45,000 00 37,857 53	7,857 53	45,000 00 30,000 00	45,000 00 30,000 00
Total					160,000 00		152,857 53	7,857 53	145,000 00	145,000 00
Balance									15,000 00	
New River.										
For removing the oyster shoal in New River, Onslow County, by means of the dredging machine now in operation in the collection district of Wilmington	July 4, 1886	5	130		5,000 00					
For opening a passage of 50 yards wide and 7 feet deep at low water, between the town of Beaufort and Pamlico Sound, North Carolina, and for improving New River, in addition to two sums of \$5,000 each, appropriated at the last session of Congress for the harbor of Beaufort and for New River	Mar. 3, 1887 July 7, 1888	5 5	190 270		20,000 00 25,000 00	1887 1888 1889	25,000 00 12,500 00 12,500 00			25,000 00 12,500 00 11,333 54
						1841		2 25		
						1852	1,440 10	1,711 64		
						1853		872 67	271 54	
						1855		20 00	892 67	
						1856				
For opening a passage of 50 yards wide and 7 feet deep at low water, between the town of Beaufort and Pamlico Sound, and for improving New River					50,000 00		51,440 10	2,606 56	1,166 46	48,833 54
Total										
North Landing River.										
North Carolina and Virginia. See "Miscellaneous," post.										
Ocracoke Inlet.										
For making a survey of the swash in Pamlico Sound, near Ocracoke Inlet, North Carolina, for the purpose of ascertaining whether the channel through the same can be deepened	May 20, 1886	4	176	1	1,000 00	1886	1,000 00			1,000 00
For purchasing a dredging-machine to be worked by steam, and employing the same for the removal of the shoals forming obstructions to the navigation near Ocracoke Inlet	May 23, 1888 Mar. 2, 1889	4 4	289 347		20,000 00 21,000 00	1889	22,000 00	17 30	17 30	21,982 70
For effecting the removal of the shoals forming obstructions to navigation near Ocracoke Inlet	Mar. 2, 1881 July 3, 1882 Mar. 2, 1883 June 28, 1884	4 4 4 4	460 552 648 703		17,000 00 22,000 00 16,700 00 15,000 00	1881 1882 1883 1884	14,355 62 20,644 38 14,400 00 14,200 00			16,800 00 14,355 62 20,644 38 14,400 00
For carrying on the works for the improvement of Ocracoke Inlet	July 2, 1886 Mar. 3, 1887	5 5	68 189		9,000 00 12,050 00	1885 1886 1887	9,300 00 1,000 00 20,107 68	57 68 30		9,300 00 942 32 20,107 38
For continuing the removal of the obstructions at Ocracoke Inlet						1839				
Total					133,750 00		133,807 68	75 28	17 60	133,732 40
Pamlico and Tar Rivers.										
For removing a sand shoal in Pamlico River by means of the dredging-machine now in operation at Ocracoke Inlet, North Carolina	July 4, 1886	5	130	1	5,000 00	1886	5,000 00			5,000 00
For continuing the improvement of Pamlico or Tar River below Washington	July 7, 1888 Aug. 14, 1876	5 19	270 134	1 1	5,000 00 15,000 00	1888 1877 1878	5,000 00 5,000 00 10,000 00			5,000 00 5,000 00 10,000 00
For the improvement of Pamlico River	Mar. 3, 1879 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 20 21 21	365 371 185 475	1 1 1 1	3,000 00 3,000 00 9,000 00 8,000 00	1880 1881 1882	6,000 00 9,000 00 10,300 41			6,000 00 9,000 00 8,000 00
For improving Tar River										
For improving Pamlico and Tar Rivers										
Total					48,000 00		50,300 41	2,300 41		48,000 00

* See "Surveys," post.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Pascotank River.</i> For making a survey of Pascotank River, North Carolina, for removing bars or obstructions in the same, and an estimate of the cost	Mar. 2, 1829	4	347	2	\$80 00	1829	\$80 00	\$32 75	\$32 75	\$47 25
Total					80 00		80 00	32 75	32 75	47 25
<i>Perquimons River.</i> For the improvement of Perquimons River, North Carolina	Aug. 14, 1876	19	135	1	2,500 00	1877	2,500 00			2,500 00
<i>Roanoke River.</i> For the improvement of the Roanoke River below Weldon, North Carolina	Mar. 3, 1871 June 10, 1872 Mar. 3, 1873 June 23, 1874	16 17 17 18	540 373 564 240	1 1 1 1	20,000 00 10,000 00 10,000 00 5,000 00	1872 1874 1875 1876	20,000 00 10,000 00 7,000 00 8,000 00			20,000 00 10,000 00 7,000 00 8,000 00
Total					45,000 00		45,000 00			45,000 00
<i>Savannah River.</i> For improving Savannah River, North Carolina	June 18, 1878 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 20 21 21	158 370 185 475	1 1 1 1	2,000 00 2,000 00 1,000 00 1,000 00	1879 1880 1881 1882	200 00 3,800 00 1,000 00 1,427 20			200 00 3,800 00 1,000 00 1,000 00
Total					6,000 00		6,427 20	427 20		6,000 00
<i>Town Creek.</i> For improving Town Creek, North Carolina	Mar. 3, 1881	21	475	1	1,000 00					
Balance									1,000 00	
<i>Trent River.</i> For improving Trent River, North Carolina	Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 21 21	371 185 475	1 1 1	7,000 00 10,000 00 5,000 00	1880 1881 1882	7,000 00 10,000 00 8,151 24			7,000 00 10,000 00 5,000 00
Total					22,000 00		25,151 24	3,151 24		22,000 00
<i>Waccamaw River.</i> North Carolina and South Carolina. See "Miscellaneous," post.										
<i>Washington Harbor.</i> For completing the improvement of the harbor of Washington, North Carolina	Aug. 30, 1852	10	58		5,000 00	1853 1854 1855	1,200 00 2,000 00 1,800 00			1,200 00 2,000 00 1,800 00
Total					5,000 00		5,000 00			5,000 00
<i>Yadkin River.</i> For Yadkin River, North Carolina	Mar. 3, 1879	20	372	1	20,000 00					
For improving Yadkin River, \$6,000 of which may be expended for the removal of dams	June 14, 1880	21	190	1	20,000 00	1881	20,000 00			20,000 00

For improving Yadkin River.....	Mar. 3, 1881	21	475	1	12,000 00	1882	35,724 39	15,724 39	20,000 00
Total					52,000 00		55,724 39	15,724 39	40,000 00
Balance							12,000 00		
OHIO.									
<i>Ashtabula Harbor.</i>									
For removing obstructions from the mouth of Ashtabula Creek, Ohio	May 20, 1826	4	176	1	12,000 00	1826	1,000 00		1,000 00
	May 19, 1828	4	275	1		1827	10,915 18		10,915 18
	Mar. 3, 1829	4	363	1	2,403 50	1828	2,000 00		2,000 00
					6,940 25	1829	6,000 00		6,000 00
						1830	1,428 57		1,428 57
For completing the removal of obstructions at the mouth of Ashtabula Creek	Mar. 2, 1831	4	459		7,015 00	1831	7,015 00		7,015 00
	July 3, 1832	4	553	1	3,800 00	1832	3,400 00		3,400 00
	Mar. 2, 1833	4	648	1	3,400 00	1833	1,125 02		1,125 02
	June 28, 1834	4	703	1	5,000 00	1834	2,655 04		2,655 04
	Mar. 3, 1835	4	754		7,591 00	1835	5,127 26		5,127 26
						1836	7,504 24	17 56	7,483 68
	Mar. 3, 1837	5	188	1	8,000 00	1837	8,000 00		8,000 00
	July 7, 1838	5	269	1	8,000 00	1838	5,970 00		5,970 00
						1839	1,600 00		1,600 00
For continuing the removal of obstructions at Ashtabula Creek	June 11, 1844	5	661			1840	60 75	369 25	60 75
	Mar. 3, 1853	10	184	1	5,000 00	1845	3,429 00		3,429 00
	Aug. 30, 1852	10	59		42 64	1846	1,571 00	42 64	1,528 36
					10,000 00	1853	2,500 00		2,500 00
						1854	5,000 00		5,000 00
						1855	2,500 00		2,500 00
						1856	42 64		42 64
To pay Henry Hubbard for services as agent	Feb. 9, 1859	11	559			1860	809 65		809 65
	June 23, 1866	14	72	1	809 65				
	Mar. 2, 1867	14	419	1	24,708 82	1867	8,000 00		8,000 00
					54,000 00	1868	15,000 00		15,000 00
						1869	34,000 00	446 77	33,553 23
						1870	20,018 16		20,018 16
	Mar. 3, 1871	16	539	1	15,000 00	1871	1,607 55		1,607 55
						1872	15,529 87		15,529 87
For the improvement of Ashtabula Harbor	June 10, 1872	17	371	1	15,000 00				
	Mar. 3, 1873	17	561	1	16,000 00	1873	21,000 00		21,000 00
						1874	10,000 00		10,000 00
	June 23, 1874	18	298	1	35,000 00				
	Mar. 3, 1875	18	457	1	25,000 00	1875	35,000 00	6 00	34,994 00
						1876	15,000 00		15,000 00
	Aug. 14, 1875	19	136	1	5,000 00	1877	10,000 00		10,000 00
						1878	5,000 00		5,000 00
	June 18, 1878	20	157	1	12,000 00	1879	9,000 00		9,000 00
	Mar. 3, 1879	20	369	1	9,000 00	1880	5,200 00		5,200 00
	June 14, 1880	21	182	1	20,000 00	1881	16,800 00		16,800 00
For improving harbor at Ashtabula, to secure a sixteen-foot channel	Mar. 3, 1881	21	470	1	20,000 00	1882	30,000 00		30,000 00
Total					330,710 86		330,811 94	512 97	330,298 97
<i>Black River Harbor.</i>									
Towards removing the sand bar at or near the mouth of Black River, Ohio, by the erection of piers or other works	May 23, 1828	4	289		7,500 00	1828	2,000 00		2,000 00
	Apr. 23, 1830	4	394		8,559 77	1829	5,500 00		5,500 00
	Mar. 2, 1831	4	459		9,275 00	1830	8,559 77		8,559 77
	July 3, 1832	4	553	1	8,000 00	1831	9,275 00		9,275 00
	Mar. 2, 1833	4	648	1	2,400 00	1832	5,580 60		5,580 60
	June 28, 1834	4	703		5,000 00	1833	4,500 00		4,500 00
For securing the works at Black River	Mar. 3, 1835	4	754		4,400 00	1834	3,319 40		3,319 40
						1835	4,622 68	557 15	4,065 53
	July 2, 1836	5	68			1836	2,000 00		2,000 00
					6,660 00	1836	6,660 00		6,660 00
	Mar. 3, 1837	5	188	1	6,410 00	1836	334 47		334 47
	July 7, 1838	5	268	1	5,000 00	1837	6,410 00		6,410 00
						1838	3,660 00		3,660 00
For continuing the removal of obstructions in Black River						1839	1,340 00	25 46	1,314 54
						1842		25 46	

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

For removing obstructions at harbor of Cleveland.....	Mar. 2, 1853	10	184	1	145 69	1854	6,000 00			6,000 00
	June 23, 1866	14	72	1	59,806 00	1855	20,545 49			20,545 49
						1867	12,000 00			12,000 00
						1868	15,000 00			15,000 00
For improvement of harbor at Cleveland.....						1869	32,611 00			31,924 80
	July 11, 1870	16	224	1	20,000 00	1870	36 86	53 06		
						1871	6,811 20			6,811 20
	Mar. 3, 1873	17	561	1	1,000 00	1872	14,000 00			14,000 00
For the improvement of Cleveland Harbor, Ohio.....	June 23, 1874	18	238	1	30,500 00	1874	1,000 00			1,000 00
For a breakwater, in five fathoms of water, to protect the com- merce of Cleveland, Ohio.....	Mar. 3, 1875	18	461	1	50,000 00	1875	32,000 00			32,000 00
For a breakwater at Cleveland, Ohio.....						1876	30,000 00			30,000 00
For repair of east pier at Cleveland Harbor, Ohio.....	Aug. 14, 1876	19	133		50,000 00					
	Aug. 14, 1876	19	133		8,000 00	1877	46,500 00			46,500 00
For breakwater at Cleveland Harbor, Ohio.....	June 18, 1878	20	157	1	100,000 00	1878	10,000 00			10,000 00
For breakwater at Cleveland, Ohio, and repairs of harbor.....	Mar. 3, 1879	20	369	1	100,000 00	1879	45,000 00			45,000 00
For improving harbor at Cleveland.....	June 14, 1880	21	182	1	125,000 00	1880	84,000 00			84,000 00
	Mar. 3, 1881	21	470	1	200,000 00	1881	81,000 00			81,000 00
						1882	113,003 00			113,003 00
Total.....					923,864 84		701,273 44	717 29	1,311 69	700,556 15
Balance.....									221,997 00	
<i>Conneaut Harbor.</i>										
For improving the navigation of Conneaut Creek, by remov- ing the bar at the mouth of the same.....	Mar. 2, 1829	4	348		7,500 00	1839	6,590 00			6,590 00
	Apr. 23, 1830	4	395		6,135 65	1840	7,045 65			7,045 65
	Mar. 2, 1831	4	459		6,370 00	1841	6,370 00			6,370 00
	July 2, 1832	4	553	1	7,800 00	1842	4,600 00			4,600 00
						1843	3,200 00			3,200 00
For continuing the removal of obstructions in Conneaut Creek.....	July 2, 1836	5	68		2,500 00	1846	2,500 00			2,500 00
	Mar. 3, 1837	5	188	1	5,000 00	1837	5,000 00			5,000 00
	July 7, 1838	5	269	1	8,000 00	1838	5,900 00			5,900 00
						1839	2,100 00			2,100 00
For the continuation of the works at Conneaut Harbor, Ohio.....	June 11, 1844	5	661		5,000 00	1845	4,797 00			4,797 00
						1846	62 30	130 37		4,734 93
	Aug. 30, 1852	10	60		10,000 00	1847	140 70			140 70
For repairing the piers at Conneaut.....						1847	1,500 00			1,500 00
For improvement of the harbor.....	June 23, 1866	14	72	1	20,513 74	1853	6,000 00			6,000 00
	Mar. 2, 1867	14	419	1	10,000 00	1854	2,500 00			2,500 00
						1855	5,000 00			5,000 00
For improvement of the harbor at the mouth of the river.....	July 11, 1870	16	224	1	6,000 00	1867	11,000 00			11,000 00
	Mar. 3, 1873	17	561	1	400 00	1868	14,213 74	1,535 33		12,678 41
	June 23, 1874	18	238	1	1,500 00	1869	1,537 74			1,537 74
	Mar. 3, 1875	18	457	1	1,000 00	1870	1,502 12			1,502 12
For the improvement of Conneaut Harbor.....	June 14, 1880	21	182	1	6,000 00	1871	4,795 47			4,795 47
						1872	400 00			400 00
						1874	2,500 00			2,500 00
						1875	100 00			100 00
						1881	5,900 00			5,900 00
						1882				
Total.....					103,719 39		105,254 72	1,065 70	130 37	103,589 02
<i>Cunningham Creek.</i>										
For the removal of obstructions at the mouth of Cunningham Creek, Ohio.....	May 20, 1826	4	176	1	2,000 00	1826	1,000 00			1,000 00
For completing the removal of obstructions at the mouth of Cunningham Creek.....	May 19, 1828	4	275	1	1,517 76	1827	1,000 00			1,000 00
	Mar. 3, 1829	4	363		2,956 00	1828	1,517 76			1,517 76
For a pier-head at Cunningham Creek.....	July 3, 1832	4	553	1	1,500 00	1829	2,956 00			2,956 00
	Mar. 2, 1833	4	648	1	500 00	1882	1,500 00			1,500 00
	July 2, 1836	5	68		1,275 00	1843	500 00			500 00
For continuing the removal of obstructions at Cunningham Creek.....	July 2, 1836	5	69		32 36	1846	1,307 36			1,307 36
	Mar. 3, 1837	5	188	1	5,000 00	1837	5,000 00			5,000 00
	July 7, 1838	5	269	1	5,000 00	1838	5,000 00			5,000 00
						1842		2 31	2 31	
Total.....					19,781 12		19,781 12	2 31	2 31	19,778 81

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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Grand River Harbor (Fairport).										
To remove obstructions at the mouth of Grand River, Ohio ..	May 20, 1826	4	176	1	\$5,620 00	1826	\$1,000 00			\$1,000 00
	May 19, 1828	4	275	1	9,135 11	1827	4,620 00			4,620 00
						1828	6,000 00			6,000 00
To complete the removal of the obstructions at the mouth of Grand River ..	Apr. 23, 1830	4	394		5,563 18	1829	3,135 11			3,135 11
	Mar. 2, 1831	4	459		5,680 00	1830	5,563 18			5,563 18
	July 3, 1832	4	553	1	2,600 00	1831	4,675 00			4,675 00
						1832	2,500 00			2,500 00
For repairing and securing the works at Grand River ..	June 28, 1834	4	703		10,000 00	1833	68 51			68 51
						1834	27 10			27 10
	July 2, 1836	5	68		6,000 00	1835	10,883 29			10,883 29
	July 7, 1838	5	270	1	10,000 00	1836	5,144 99			5,144 99
						1837	981 11			981 11
For continuing the removal of obstructions at Grand River ..						1838	7,148 00			7,148 00
	June 11, 1844	5	661		10,000 00	1839	2,832 00	\$3 30	\$3 30	2,848 70
	Aug. 30, 1852	10	59		10,000 00	1842	7,300 00			7,300 00
						1845	2,700 00			2,700 00
For the further improvement of Grand River Harbor ..						1846	1,500 00			1,500 00
For the further improvement of the harbor of Fairport, at the mouth of Grand River ..	June 23, 1866	14	72		24,072 00	1853	7,000 00			7,000 00
	Mar. 2, 1867	14	419		60,000 00	1854	1,500 00			1,500 00
						1855	2,000 00			2,000 00
						1867	8,000 00			8,000 00
						1868	25,000 00	4,684 63		20,315 37
						1869	32 40			32 40
For the improvement of harbor at Grand River ..	June 23, 1874	18	238	1	20,000 00	1870	59 64			59 64
	Mar. 3, 1875	18	457	1	15,000 00	1871	30,000 00			30,000 00
						1872	10,000 00			10,000 00
	Aug. 14, 1876	19	136	1	5,000 00	1873	30,000 00			30,000 00
	June 18, 1878	20	157	1	5,000 00	1874	13,664 59			13,664 59
						1875	30,000 00			30,000 00
						1876	5,000 00			5,000 00
						1877	5,000 00			5,000 00
						1879	1,000 00			1,000 00
For the improvement of Fairport Harbor ..	June 14, 1880	21	182	1	3,000 00	1880	4,000 00			4,000 00
	Mar. 3, 1881	21	470	1	10,000 00	1882	8,500 00			8,500 00
Total ..					216,670 29		216,854 92	4,687 93	3 30	212,166 99
Balance ..									4,500 00	
Huron River and Harbor.										
To remove obstructions in Huron River, Ohio ..	May 20, 1826	4	176	1	5,000 00	1826	1,500 00			1,500 00
	May 19, 1828	4	275	1	4,413 35	1827	3,500 00			3,500 00
	Mar. 3, 1829	4	363	1	5,925 00	1828	4,413 35			4,413 35
To complete the removal of obstructions at the mouth of Huron River ..	Apr. 23, 1830	4	394	1	1,880 36	1829	5,935 00			5,935 00
	Mar. 2, 1831	4	459		3,480 00	1830	1,880 36			1,880 36
	July 3, 1832	4	553	1	1,500 00	1831	3,480 00			3,480 00
						1832	1,070 00			1,070 00
	June 28, 1834	4	703		6,700 00	1833	39 49			39 49
	July 2, 1836	5	69		4,300 00	1834	2,712 64			2,712 64
For extending and securing the works at Huron River ..	Mar. 3, 1837	5	188	1	2,565 00	1835	2,592 87			2,592 87
						1836	4,397 27			4,397 27
						1837	4,352 73			4,352 73

For further improvements at the mouth of Huron River.....	July 7, 1838	5	268	1	5,000 00	1838	4,250 00	.....	.....	4,250 00
						1839	750 00	.....	.....	747 30
For continuing the works at the Huron Harbor, on Lake Erie.	June 11, 1844	5	661	.....	5,000 00	1842	.....	2 70	.....	.....
For repairing the piers at Huron River Harbor	Aug. 30, 1852	10	60	.....	10,000 00	1846	5,000 00	.....	.....	4,999 65
	June 23, 1866	14	72	1	39,000 00	1847	.....	35	.....	.....
For improvement of harbor at Huron .....	.....	.....	.....	.....	.....	1853	4,250 00	.....	.....	4,250 00
	.....	.....	.....	.....	.....	1854	5,750 00	.....	.....	5,750 00
For continuing the improvement of the harbor at Huron.....	June 18, 1878	20	157	1	1,000 00	1867	10,000 00	.....	.....	10,000 00
	June 14, 1880	21	182	1	3,000 00	1868	19,000 00	.....	.....	18,986 95
	Mar. 3, 1881	21	470	1	3,000 00	1869	.....	1 17	.....	.....
Total.....					104,273 71	1870	6 74	18 62	.....	.....
						1871	713 05	.....	.....	713 05
<i>Maumee River.</i>						1872	1,000 00	.....	.....	1,000 00
For improvement of Maumee Bay and River, Ohio.....	Mar. 2, 1867	14	419	1	20,000 00	1873	3,000 00	.....	.....	3,000 00
						1874	3,300 00	.....	.....	3,300 00
For the improvement of Maumee River above Toledo	June 10, 1872	17	371	1	7,000 00	1875	2,500 00	.....	.....	2,500 00
Total					27,000 00	1876	1,000 00	.....	.....	1,000 00
						1877	2,000 00	.....	.....	2,000 00
<i>Muskingum River—Ice Harbor.</i>						1881	4,000 00	.....	.....	4,000 00
For an ice harbor at the mouth of the Muskingum River.....	Mar. 3, 1879	20	368	1	30,000 00	1882	.....	.....	.....	104,270 66
	June 14, 1880	21	182	1	50,000 00	.....	5,000 00	.....	.....	5,000 00
	Mar. 3, 1881	21	470	1	30,000 00	.....	12,500 00	.....	.....	12,500 00
Total					110,000 00	.....	.....	.....	.....	.....
					
<i>Ohio River.</i>						.....	.....	.....	.....	.....
Ohio and Kentucky. See "Miscellaneous," post.						.....	.....	.....	.....	.....
<i>Port Clinton Harbor.</i>						.....	.....	.....	.....	.....
For the improvement of Port Clinton Harbor, Ohio	June 10, 1872	17	371	1	8,000 00	1873	8,000 00	.....	.....	8,000 00
	Mar. 3, 1875	18	457	1	5,000 00	1874	5,000 00	.....	.....	5,000 00
	Aug. 14, 1876	19	136	1	5,000 00	1875	5,000 00	.....	.....	5,000 00
	June 18, 1878	20	153	1	10,000 00	1876	10,000 00	.....	.....	10,000 00
	Mar. 3, 1879	20	369	1	10,000 00	1877	4,600 00	.....	.....	4,600 00
	June 14, 1880	21	182	1	5,000 00	1881	10,400 00	.....	.....	10,400 00
	Mar. 3, 1881	21	471	1	5,000 00	1882	5,000 00	.....	.....	5,000 00
Total.....					48,000 00	.....	48,000 00	.....	.....	48,000 00
<i>Rocky River Harbor.</i>						.....	.....	.....	.....	.....
For the improvement of Rocky River Harbor, Ohio	June 10, 1872	17	371	1	10,000 00	1873	9,000 00	.....	.....	9,000 00
	June 23, 1874	18	238	1	10,000 00	1874	1,000 00	.....	.....	1,000 00
	Mar. 3, 1875	18	457	1	15,000 00	1875	15,000 00	.....	.....	15,000 00
For repair of pier in Rocky River	June 14, 1880	21	192	1	4,000 00	1876	10,000 00	.....	.....	10,000 00
Total					39,000 00	1881	2,610 00	.....	.....	2,610 00
Balance .....						.....	37,610 00	.....	.....	37,610 00
						.....	.....	1,390 00	.....	.....

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Sandusky City Harbor.</i>										
For making a survey of Sandusky Bay, to ascertain the expediency and expense of constructing piers, to improve the navigation thereof, and of placing buoys therein	May 20, 1826	4	176	1	\$400 00	1826	\$400 00			\$358 30
						1827		\$41 70	\$41 70	
	June 11, 1844	5	632		15,000 00	1845	13,889 00			13,889 00
						1846	900 00			821 63
For the preservation of the harbor at Sandusky City, and improving the same, to be expended under the orders of the Secretary of War, and according to such plan of improvement as may be recommended by him						1847	221 00			
						1849		121 66		
						1851		70 50		
						1852	130 47	227 68		
	Aug. 30, 1852	10	58		15,000 00	1853	4,250 00		289 37	4,250 00
						1854	8,577 47			8,577 47
						1855	2,172 53			2,172 53
	June 23, 1866	14	72	1	38,580 00	1867	3,000 00			3,000 00
						1868	17,000 00			17,000 00
						1869	18,280 00			18,280 00
						1870	6 78			6 78
For improvement of harbor at Sandusky City	July 11, 1870	16	224	1	10,000 00	1871	5,793 22			5,793 22
						1872	4,500 00			4,500 00
	June 10, 1872	17	371	1	13,000 00	1873	18,000 00			18,000 00
	Mar. 3, 1873	17	561	1	25,000 00	1874	20,000 00			20,000 00
For the improvement of Sandusky City Harbor	June 23, 1874	18	238	1	25,000 00	1875	35,000 00			35,000 00
	Mar. 3, 1875	18	457	1	25,000 00	1876	15,000 00			15,000 00
						1877	12,500 00			12,500 00
	Aug. 14, 1876	19	133	1	25,000 00	1878	12,500 00			12,500 00
						1879	18,000 00			18,000 00
For improving harbor at Sandusky City	June 18, 1878	20	157	1	20,000 00	1880	3,000 00			3,000 00
	Mar. 3, 1879	20	369	1	1,000 00	1881	12,500 00			12,500 00
For improving and surveying harbor at Sandusky City	June 14, 1880	21	182	1	10,000 00	1882	9,000 00			9,000 00
	Mar. 3, 1881	21	471	1	10,000 00					
Total					235,480 00		234,610 47	461 54	331 07	234,148 93
Balance									1,000 00	
<i>Sandusky River.</i>										
For improvement of Sandusky River from Fremont to Lake Erie	Mar. 2, 1867	14	419	1	20,000 00	1868	14,000 00			14,000 00
						1869	5,700 00			5,700 00
						1870	1 04			1 04
						1871	1 04			1 04
						1872	297 92			297 92
For the improvement of Sandusky River	June 10, 1872	17	371	1	10,000 00	1873	10,000 00			10,000 00
	June 14, 1880	21	187	1	10,000 00	1881	10,000 00			10,000 00
	Mar. 3, 1881	21	477	1	7,500 00	1882	7,500 00			7,500 00
Total					47,500 00		47,500 00			47,500 00
<i>Toledo Harbor.</i>										
	June 23, 1866	14	72	1	20,000 00	1867	6,500 00			6,500 00
						1868	13,500 00			13,498 70
						1869		1 30		
						1870	1 30			1 30
	July 11, 1870	16	224	1	50,000 00	1871	26,400 00			26,400 00
	Mar. 3, 1871	16	539	1	50,000 00	1872	73,600 00			73,600 00

For improvement of the harbor at Toledo, Ohio.....	June 10, 1872	17	371	1	15,000 00	1873	30,000 00			30,000 00
	Mar. 3, 1873	17	561	1	100,000 00	1874	85,000 00			85,000 00
	June 23, 1874	18	238	1	75,000 00	1875	75,000 00	1,000 00		75,000 00
	Mar. 3, 1875	18	457	1	75,000 00	1876	75,000 00			75,000 00
	Aug. 14, 1876	19	133	1	60,000 00	1877	12,500 00			12,500 00
	June 18, 1878	20	156	1	50,000 00	1878	47,500 00			47,500 00
	Mar. 3, 1879	20	339	1	20,000 00	1880	41,000 00			41,000 00
	June 14, 1880	21	182	1	30,000 00	1881	23,300 00			23,300 00
	Mar. 3, 1881	21	471	1	40,000 00	1882	35,700 00			35,700 00
Total					585,000 00		566,001 30	1,001 30		585,000 00
Balance									20,000 00	
Vermillion River and Harbor.										
For constructing two piers and improving the navigation at the mouth of the Vermillion River, Ohio, according to the plan reported to the War Department.....	July 4, 1836	5	130	1	30,000 00	1836	7,400 00			7,400 00
	Mar. 3, 1837	5	188	1	20,000 00	1837	22,600 00			22,600 00
	July 7, 1838	5	269	1	23,626 57	1838	11,746 00			11,746 00
	June 23, 1866	14	72	1	15,315 74	1866	11,277 00			11,277 00
	Mar. 3, 1873	17	561	1	12,000 00	1873	6,500 00	3 27		6,500 00
	June 23, 1874	18	238	1	3,000 00	1874	8,815 74	10 49		8,805 25
	Mar. 3, 1875	18	457	1	10,000 00	1875	9,000 00			9,000 00
	Aug. 14, 1876	19	133	1	5,000 00	1876	8,000 00			8,000 00
	June 18, 1878	20	157	1	4,000 00	1877	5,000 00			5,000 00
	June 14, 1880	21	182	1	2,000 00	1879	4,000 00			4,000 00
	Mar. 3, 1881	21	471	1	2,000 00	1881	2,000 00			2,000 00
Total					111,942 31		111,942 53	13 76	13 54	111,928 77
OREGON.										
Cascades of the Columbia.										
Oregon and Washington. See "Miscellaneous," post.										
Columbia River.										
Oregon and Washington. See "Miscellaneous," post.										
Coos Bay Harbor.										
For improving the entrance to and harbor of Coos Bay, Oregon.	Mar. 3, 1879	20	370	1	40,000 00	1880	40,000 00			40,000 00
For continuing improvement at the entrance of Coos Bay Harbor	Mar. 3, 1881	21	479	1	30,000 00	1881	20,000 00			20,000 00
Total					70,000 00		70,000 00			70,000 00
Coquille River.										
For improvement of the mouth of Coquille River, Oregon.....	June 14, 1880	21	193	1	10,000 00	1881	10,000 00			10,000 00
Umpqua River.										
For improvement of the Umpqua River, Oregon.....	Mar. 3, 1871	16	541		22,500 00	1872	19,000 00	1,185 89		17,814 11
Balance									4,685 89	
Willamette River.										
For removal of obstructions to navigation in the Willamette River, between Portland, Oreg., and its mouth	June 23, 1866	14	73	1	15,000 00	1867	15,000 00			15,000 00
	Mar. 2, 1867	14	421		30,000 00	1868	20,000 00			20,000 00
To improve the navigation of the Willamette River below the city of Portland.....						1869	9,500 00			9,500 00
						1870	286 27			286 27

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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<i>Willamette River</i> —Continued.										
For improvement of the Willamette River at Portland and to the mouth of river	July 11, 1870	16	226	\$31,000 00
For improvement of Willamette River above Oregon City	Mar. 3, 1871	16	541	.....	16,000 00	1871	\$15,007 09	.....	.....	\$15,007 09
For the improvement of the Lower Willamette River	June 10, 1872	17	375	.....	50,000 00	1872	23,000 00	.....	.....	23,000 00
	Mar. 3, 1873	17	565	.....	3,000 00	1873	51,500 00	.....	.....	51,500 00
	June 23, 1874	18	242	.....	7,500 00	1874	10,706 64	\$5 02	.....	10,701 62
	Mar. 3, 1875	18	460	1	25,000 00	1875	7,500 00	3 45	.....	7,496 55
For continuing the improvement of the Upper Willamette River	Aug. 14, 1876	19	135	1	20,000 00	1876	20,000 00	.....	.....	20,000 00
	June 18, 1878	20	157	1	20,000 00	1877	21,000 00	4 76	\$8 47	20,995 24
	Mar. 3, 1879	20	370	1	20,000 00	1878	4,004 76	.....	.....	4,004 76
	Mar. 3, 1879	20	370	1	12,000 00	1879	20,000 00	.....	.....	20,000 00
Total					229,500 00	.....	229,504 76	13 23	8 47	229,491 53
<i>Lower Willamette and Columbia Rivers.</i>										
For the improvement of the Lower Willamette and Columbia Rivers from Portland, Oreg., to the sea	Mar. 3, 1873	17	565	1	20,000 00	1873	9,206 64	.....	.....	9,206 64
	June 23, 1874	18	242	1	20,000 00	1874	10,793 36	.....	.....	10,793 36
	Mar. 3, 1875	18	460	1	20,000 00	1875	20,000 00	.....	.....	20,000 00
	Aug. 14, 1876	19	135	1	20,000 00	1876	15,000 00	.....	.....	15,000 00
For improving Lower Willamette and Columbia Rivers from Portland to the sea, including the bar at the mouth of the Columbia River	June 18, 1878	20	157	1	30,000 00	1877	9,000 00	.....	.....	9,000 00
	Mar. 3, 1879	20	370	1	45,000 00	1878	10,000 00	.....	.....	10,000 00
	June 14, 1880	21	189	1	45,000 00	1879	16,000 00	.....	.....	16,000 00
	Mar. 3, 1881	21	479	1	45,000 00	1880	65,000 00	.....	.....	65,000 00
Total					245,000 00	.....	245,000 00	.....	.....	245,000 00
<i>Willamette and Yamhill Rivers.</i>										
For improving Upper Willamette and Yamhill Rivers, Oregon	June 14, 1880	21	189	1	12,000 00	.....	.....	.....	.....	.....
Total	Mar. 3, 1881	21	479	1	15,000 00	1881	22,000 00	.....	.....	22,000 00
					27,000 00	1882	5,000 00	.....	.....	5,000 00
<i>Yaquina Bay.</i>										
For improvement of the entrance to Yaquina Bay, Oregon	June 14, 1880	21	193	1	40,000 00	.....	.....	.....	.....	.....
Total	Mar. 3, 1881	21	481	1	10,000 00	1881	44,000 00	.....	.....	44,000 00
					50,000 00	1882	6,000 00	.....	.....	6,000 00
<i>PENNSYLVANIA.</i>										
<i>Allegheny River.</i>										
For the improvement of the navigation of the Allegheny River from the mouth of French Creek to Pittsburgh, Pa.	Mar. 3, 1879	20	364	1	10,000 00	1880	10,000 00	.....	.....	10,000 00
Total	June 14, 1880	21	184	1	20,000 00	1881	20,000 00	.....	.....	20,000 00
	Mar. 3, 1881	21	473	1	25,000 00	1882	25,000 00	.....	.....	25,000 00
Total					55,000 00	.....	55,000 00	.....	.....	55,000 00

<i>Chester Creek.</i> For improving Chester Creek, Pennsylvania.....	Mar. 3, 1881	21	480	1	3,000 00	1881	3,000 00				3,000 00
<i>Chester Harbor.</i> To defray the expense of a survey of the public piers at Chester, in the river Delaware, in order to determine the expediency of accepting the cession thereof made by the State of Pennsylvania, and the expense of repairing the same.....	May 20, 1826	4	176	1	100 00	1826	28 25				28 25
For repairs at the harbor of Chester.....	July 4, 1836	5	130	1	3,000 00	1836	3,000 00			71 75	
For continuing the repairs at the harbor of Chester.....	Mar. 3, 1837	5	189	1	2,000 00	1837	2,000 00				3,000 00
	Aug. 30, 1852	10	56		5,000 00	1853	5,000 00				2,000 00
For the repairs of the works at the harbor of Chester, on the Delaware River.....						1854	3 00		3 00		4,892 25
						1857			107 75		
	Mar. 2, 1867	14	420	1	11,000 00	1860	10,500 00		107 75		
For the improvement of Chester Harbor.....						1868	147 14				10,500 00
						1869	3 35				147 14
						1870					3 35
For the construction of ice harbor at Chester.....	Aug. 14, 1876	19	134	1	2,600 00	1872	2,600 00			349 51	
	June 18, 1878	20	157	1	3,400 00	1879	3,400 00				2,600 00
Total.....					27,100 00		26,681 74	110 75	529 01		3,400 00
<i>Delaware River.</i> Pennsylvania, New York, Delaware, and New Jersey. See "Miscellaneous," <i>post</i>	May 26, 1824	4	38	1	20,000 00	1824	3,000 00				3,000 00
						1825	11,420 19				11,420 19
<i>Erie Harbor (formerly Presque Isle).</i> For making or deepening the channel leading into the harbor of Presque Isle, Pennsylvania.....	Mar. 25, 1826	4	151	1	7,000 00	1826	9,095 00				9,095 00
For completing the works for deepening the channel of entrance into the harbor of Presque Isle.....											
For completing the works and deepening the channel of entrance into the harbor of Presque Isle, to cover the expense of work done and to be done, which has not been contemplated by any appropriation heretofore made.....	Mar. 2, 1827	4	215	1	2,000 00	1827	5,484 81				5,484 81
For deepening the channel of entrance into the harbor of Presque Isle.....	May 19, 1828	4	275	1	6,223 18	1828	6,223 18				6,223 18
For closing the breach made in the peninsula at Presque Isle Bay.....	Mar. 3, 1829	4	363		7,390 25	1829	7,390 25				7,390 25
	Mar. 2, 1831	4	459		1,700 00	1831	1,700 00				1,700 00
For completing the improvement of the harbor of Presque Isle.....	July 3, 1832	4	552	1	4,500 00	1832	3,000 00				3,000 00
	Mar. 2, 1833	4	648	1	6,000 00	1833	7,500 00				7,500 00
For filling up and securing a breach in the south embankment at Presque Isle.....	June 28, 1834	4	703		3,045 00						
For securing the works at Presque Isle.....	June 28, 1834	4	703		20,000 00	1834	13,000 00				13,000 00
	Mar. 3, 1835	4	754		5,000 00	1835	16,308 93	1,263 93			15,045 00
For continuing the improvement of the harbor of Presque Isle according to Colonel Totten's recommendation.....	July 2, 1836	5	68		15,000 00						
For repairing breach in the peninsula at Presque Isle.....	July 2, 1836	5	69		15,122 80	1836	15,122 80	68 52			15,054 28
	Mar. 3, 1837	5	188	1	15,000 00	1837	15,068 52				15,068 52
	July 7, 1838	5	269	1	30,000 00	1838	15,000 00				15,000 00
						1839	13,954 00				13,954 00
For continuing the improvement of the harbor of Presque Isle.....	June 11, 1844	5	661		40,000 00	1840	1,046 00				1,046 00
						1845	22,454 92				22,454 92
						1846	16,650 00				16,650 00
						1847	895 08				895 08
For continuation of the works at the harbor of Erie (formerly Presque Isle), on Lake Erie.....	Aug. 30, 1852	10	59		30,000 00	1853	9,807 91				9,807 91
						1854	7,304 30				7,304 30
						1855	12,887 79				12,887 79
						1862		166 07			
						1863			166 07		
For improvement of harbor and repair of public works at Erie.....	June 23, 1866	14	72		36,961 00						5,000 00
	Mar. 2, 1867	14	419		25,000 00	1867	5,000 00				41,000 00
For extending the pier at Erie Harbor, and dredging channel through to outer bar.....						1868	41,000 00				41,000 00
						1869	15,000 00	634 92			1,365 08
						1870	15,60 01				60 01

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

<i>Presque Isle Harbor.</i> See "Erie Harbor," ante.	July 11, 1870	16	224	1	15,000 00	1871	18,000 00			18,000 00
	Mar. 3, 1871	16	539	1	10,000 00	1872	7,000 00			7,000 00
<i>Schuylkill River.</i> For clearing and buoying the channel of the Schuylkill River { at its mouth, at Gibson's Point, and above to the Chestnut { street bridge, Philadelphia, Pa.	June 10, 1872	17	373	1	40,000 00					
For clearing and improving the channel of the Schuylkill River { from its mouth to the Chestnut street bridge, Philadelphia, { of which sufficient is to be used for removing the rock be- { tween Locust street and the said bridge.	Mar. 3 1873	17	564	1	40,000 00	1873	38,500 00			38,500 00
For the improvement of the channel of the Schuylkill River, { of which a portion shall be used for commencing the removal { of the rocks at and near South street wharf.	June 23, 1874	18	240	1	20,000 00	1874	41,500 00	33		41,499 67
	Mar. 3, 1875	18	459	1	20,000 00	1875	32,000 00			32,000 00
	Aug. 14, 1876	19	135	1	20,000 00	1876	8,000 00			8,000 00
	June 18, 1878	20	159	1	30,000 00	1877	10,500 00		33	10,500 00
	Mar. 3, 1879	20	364	1	25,000 00	1878	11,979 39	2,479 39		9,500 00
	June 14, 1880	21	184	1	40,000 00	1880	25,000 00			30,000 00
	Mar. 3, 1881	21	473	1	40,000 00	1881	26,500 00			25,000 00
						1882	9,500 00			9,500 00
Total					300,000 00		258,479 39	2,479 72	33	255,999 67
Balance									44,000 00	
<i>Susquehanna River.</i> For improving Susquehanna River, Pennsylvania, from Rich- { ard's Island up.	June 14, 1880	21	190	1	15,000 00	1881	20,000 00			20,000 00
	Mar. 3, 1881	21	481	1	15,000 00	1882	15,000 00	5,000 00		10,000 00
Total					30,000 00		35,000 00	5,000 00		30,000 00
<i>Youghiogheny River.</i> See "Surveys," post.										
RHODE ISLAND.										
<i>Block Island Harbor.</i> For construction of breakwater at Block Island, Rhode Island. { For the improvement of the breakwater at Block Island. { For the improvement of the harbor at Block Island. { For the improvement of the breakwater at Block Island. { For improving Block Island Harbor.	July 11, 1870	16	225	1	30,000 00	1871	30,003 92			30,003 92
	Mar. 3, 1871	16	540	1	75,000 00	1872	50,000 00			50,000 00
	June 10, 1872	17	374	1	50,000 00	1873	64,996 08			64,996 08
	Mar. 3, 1873	17	564	1	50,000 00	1874	50,000 00			50,000 00
	June 23, 1874	18	241	1	20,000 00	1875	30,000 00			30,000 00
	Mar. 3, 1875	18	460	1	20,000 00	1877	20,000 00			20,000 00
	Aug. 14, 1876	19	137	1	40,000 00	1878	40,000 00			40,000 00
	June 14, 1880	21	190	1	6,000 00	1881	6,000 00			6,000 00
Total					201,000 00		291,000 00			291,000 00
<i>Church's Cove Harbor.</i> For making a survey and examination to ascertain the expe- { diency and expense of constructing piers to improve the har- { bor of Church's Cove, in the town of Little Compton, R. I. { For a breakwater at Church's Cove Harbor, in the town of Lit- { tle Compton.	Mar. 2, 1827	4	229	1	200 00	1827	200 00	4 81		195 19
						1828			4 81	
	July 4, 1836	5	129	1	10,000 00	1837	7,821 30			7,821 30
	July 7, 1838	5	270	1	18,000 00	1838	3,748 70			3,748 70
						1839	15,422 00			15,422 00
						1840	1,008 00			1,008 00
For continuing the breakwater at Church's Cove.										
Total					28,200 00		28,200 00	4 81	4 81	28,195 19
<i>Little Narragansett Bay.</i> Rhode Island and Connecticut. See "Miscellaneous," post.										

APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Narragansett Bay.</i> See "Providence River and Narragansett Bay," post.										
<i>Newport Harbor.</i> For dredging at the entrance of Newport Harbor, Rhode Island, and for a jetty on the south end of Goat Island.....	Mar. 3, 1873	17	564	1	\$8,500 00	1874	\$8,500 00			\$8,500 00
	June 23, 1874	18	241	1	10,000 00					10,000 00
	Mar. 3, 1875	18	460	1	10,000 00	1875	10,000 00			10,000 00
For continuing the improvement of the harbor at Newport...					1876	10,000 00				10,000 00
	Mar. 3, 1881	21	480	1	25,000 00	1882	25,000 00			25,000 00
Total					53,500 00		53,500 00			53,500 00
<i>Pawcatuck River.</i> Rhode Island and Connecticut. See "Miscellaneous," post.										
<i>Pawtucket River.</i>										
	Mar. 2, 1867	14	421	1	17,000 00	1867	3,000 00			3,000 00
						1868	13,900 00			13,900 00
	July 11, 1870	16	225	1		1869	93 64			93 64
	Mar. 3, 1871	16	540	1	8,000 00					
					7,000 00	1871	8,000 40			8,000 40
	June 10, 1872	17	374	1	10,000 00	1872	7,000 00			7,000 00
	Mar. 3, 1873	17	564	1	10,000 00	1873	10,000 00			10,000 00
						1874	1,000 00			1,000 00
						1875	9,000 00			9,000 00
						1877			\$5 96	
Total					52,000 00		51,994 04		5 96	51,994 04
<i>Potomac River.</i> For improving Potomac River, Rhode Island	Mar. 3, 1881	21	473	1	5,000 00	1882	5,000 00			5,000 00
<i>Providence River and Harbor.</i>										
For removing a rock near the mouth of the Seekonk River, harbor of Providence, R. I.	Aug. 30, 1852	10	57		5,000 00	1853	250 00			250 00
						1854	4,750 00			4,691 99
						1855		\$58 01		
	Aug. 30, 1852	10	59		1,500 00	1858			58 01	
For a survey of Providence Harbor.....	Mar. 2, 1867	14	421		25,000 00	1863	7,000 00	1 18		1,498 82
						1867	20,000 00	2,050 00		7,000 00
For improvement of Providence River off Pawtuxet Bar, and at the Crook.....						1868	37 26			17,950 00
	July 11, 1870	16	225		5,000 00	1870	3 94			37 26
For the improvement of Bulkhead Rock in Providence River.	July 15, 1870	16	297		2,500 00	1871	5,000 00			5,000 00
	June 10, 1872	17	374	1	10,000 00	1872	2,500 00	8 18		2,491 82
	Mar. 3, 1873	17	564	1	10,000 00	1873	10,000 00			10,000 00
For the improvement of Providence River.						1874	10,000 00			10,000 00
For improving Providence River, removing Bulkhead Rock	June 18, 1878	20	159	1	5,000 00	1877	5,000 00		16 98	5,000 00
Total					64,000 00		66,041 20	2,117 37	76 17	63,923 53

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

	June 14, 1880 Mar. 3, 1881	21 21	191 477	1 1	7,000 00 3,000 00 10,000 00	1881 1882	3,000 00 7,000 00 10,000 00	..... ..... .....	..... ..... .....	3,000 00 7,000 00 10,000 00
<i>Duck River.</i>										
For improving Duck River, Tennessee										
Total										
<i>French Broad River.</i>										
Tennessee and North Carolina. See "Miscellaneous," <i>post</i> .										
<i>Hiwassee River.</i>										
For the improvement of the Hiwassee River, Tennessee	Aug. 14, 1875	19	134	1	10,000 00	1877	4,000 00	.....	.....	4,000 00
	June 18, 1878	20	155	1	10,000 00	1878	6,000 00	.....	.....	6,000 00
	Mar. 3, 1879	20	368	1	3,000 00	1879	10,000 00	.....	.....	10,000 00
	June 14, 1880	21	187	1	3,000 00	1880	3,000 00	.....	.....	3,000 00
	Mar. 3, 1881	21	477	1	1,500 00	1881	3,000 00	.....	.....	3,000 00
Total					27,500 00	1882	1,500 00	.....	.....	1,500 00
							27,500 00	.....	.....	27,500 00
<i>Memphis Harbor.</i>										
See "Mississippi River," <i>post</i> .										
<i>Mississippi River.</i>										
Tennessee and Arkansas. See "Miscellaneous," <i>post</i> .										
<i>Obed's River.</i>										
For improving Obed's River, Tennessee	June 14, 1880 Mar. 3, 1881	21 21	191 477	1 1	4,000 00 2,500 00 6,500 00	1881 1882	2,000 00 4,500 00 6,500 00	..... ..... .....	..... ..... .....	2,000 00 4,500 00 6,500 00
Total										
<i>Red River.</i>										
For improving Red River, from its mouth to Port Royal, in Montgomery County, Tennessee	Mar. 3, 1881	21	477	1	5,000 00	1882	5,000 00	.....	.....	5,000 00
<i>Tennessee River.</i>										
Tennessee, Kentucky, and Alabama. See "Miscellaneous," <i>post</i> .										
<i>Aransas Pass and Bay.</i>										
For improving Aransas Pass and Bay up to Rockport and Corpus Christi, Texas; which sum shall be expended in deepening the channel across the outer bar of Aransas Pass and the protection of the head of Mustang Island: <i>Provided</i> , That if the expenditure of said sum in the manner indicated herein involve the improvement of any channel or way owned or controlled by any corporation or person with the right to levy tolls or otherwise to affect the navigation and commerce thereof, no part of said sum shall be expended until such right, ownership, and control shall have been sur- rendered and relinquished to the United States free of cost, in manner and form to be approved by the Secretary of War	Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	20 21 21	371 186 477	1 1 1	35,000 00 65,000 00 80,000 00	1880 1881 1882	20,000 00 80,000 00 80,000 00	..... ..... .....	..... ..... .....	20,000 00 80,000 00 80,000 00
Total					180,000 00		180,000 00	.....	.....	180,000 00
<i>Brazos River.</i>										
For improving channel over bar at mouth of Brazos River, Texas, including a report upon the capacity of the harbor at the mouth of the Brazos, and its adaptability as a harbor of refuge and naval station	June 14, 1880 Mar. 3, 1881	21 21	191 477	1 1	40,000 00 40,000 00 80,000 00	1881 1882	35,500 00 44,500 00 80,000 00	..... ..... .....	..... ..... .....	35,500 00 44,500 00 80,000 00
Total										
<i>Brazos Santiago Harbor.</i>										
For removing wrecks and other obstructions to navigation at Brazos Santiago, Tex	June 14, 1878 June 18, 1880	20 21	155 192	1 1	6,000 00 25,000 00	1879 1881	6,000 00 5,000 00	..... .....	..... .....	6,000 00 5,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Brazos Santiago Harbor</i> —Continued. For improving bar and harbor at Brazos Santiago	Mar. 3, 1881	21	481	1	\$75,000 00	1882	\$40,000 00			\$40,000 00
Total					106,000 00		51,000 00		\$55,000 00	51,000 00
Balance										
<i>Colorado River.</i>										
For the improvement of the navigation of the Colorado River, Texas	Aug. 30, 1852	10	57		20,000 00	1853	1,000 00			1,000 00
						1854	19,000 00			18,775 64
						1856	238 22	\$238 22		
						1858		182 86	182 86	
						1861		41 50	41 50	
Total					20,000 00		20,238 22	462 58	224 36	19,775 64
<i>Cypress Bayou.</i> Texas and Louisiana. See "Miscellaneous," post.										
<i>Galveston Harbor and Bay.</i>										
For improvement of Galveston Harbor, Texas	July 11, 1870	16	226		25,000 00	1871	2,000 00			2,000 00
	Mar. 3, 1871	16	541		20,000 00	1872	43,000 00			43,000 00
For the improvement of bar in Galveston Bay	June 10, 1872	17	373		10,000 00					
For improvement of the harbor of Galveston	June 10, 1872	17	373		31,000 00	1873	41,000 00			41,000 00
For continuing the improvement of the harbor at Galveston	June 23, 1874	18	242		60,000 00					
For the improvement of Red Fish Bar, in Galveston Bay	June 23, 1874	18	243		10,000 00					
For the improvement of the harbor at Galveston	Mar. 3, 1875	18	458		10,200 00					
For the improvement of the ship channel between the mouth of San Jacinto River to Bolivar Channel, in Galveston Bay	Mar. 3, 1875	18	461		150,000 00	1875	141,500 00			141,500 00
For continuing the improvement on the outer bar at Galveston	Mar. 3, 1875	18	461		25,000 00	1876	113,700 00			113,700 00
For the continuing of the work on the ship channel in Galveston Bay, to be expended between Red Fish Bar and Morgan's Point	Mar. 3, 1875	18	461							
For the purpose of confining the improvements of Galveston Harbor	Aug. 14, 1876	19	136		142,000 00					
	Aug. 14, 1876	19	138		72,000 00	1877	117,000 00	13 44		117,000 00
For improving entrance to Galveston Harbor	June 7, 1878	20	100		75,000 00	1878	25,013 44			25,000 00
For improvement of ship channel in Galveston Bay, between Bolivar Channel and Red Fish Bar; and the appropriation made for this work by the act of August 14, 1876, is hereby made available for the same part of said channel	June 18, 1878	20	153	1	50,000 00					
For improving entrance to Galveston Harbor	June 18, 1878	20	153	1	75,000 00	1879	119,000 00	2 62		118,997 38
The act of March 3, 1879, provides "That, in consideration of the proposition of the Buffalo Bayou Ship Channel Company to turn over their work at Morgan's Point, and to surrender their charter granted by the legislature of Texas, and the rights accruing thereunder, to the United States, which proposition is now on file in the War Department, and is hereby accepted; the government hereby adopts the line surveyed from the cut in Red Fish Bar to the cut in Morgan's Point, and appropriates therefor \$30,000: <i>Provided</i> , That no part of said sum shall be expended until said Buffalo Bayou Ship Channel Company shall file with the Secretary of War, in manner and form to be by him approved, their acceptance of this provision of this act"	Mar. 3, 1879	20	365	1	100,000 00					
	Mar. 3, 1879	20	367	1	80,000 00	1880	226,002 62			226,002 62

[illegible]

*See, also, "James and Appomattox Rivers," *post.*

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Reference to the Stats. at Large.			Date of act making the appropriation.	Amount of annual appropriation.		Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
	Volume.	Page.	Section.								
<i>Appomattox River</i> —Continued.											
For the improvement of the Appomattox River below Petersburg, Va.	June 23, 1874	18	240	1	\$30,000 00	1874	\$30,000 00				\$30,000 00
	Mar. 3, 1875	18	459	1	30,000 00	1875	30,000 00				30,000 00
	Aug. 14, 1876	19	135	1	30,000 00	1876	30,000 00				30,000 00
	June 18, 1878	20	132	1	30,000 00	1877	20,000 00				20,000 00
For improving Appomattox River.	Mar. 3, 1879	20	364	1	30,000 00	1878	10,000 00				10,000 00
For improving Appomattox River, to be expended on the improvement of the river and harbor at Petersburg.	June 14, 1880	21	185	1	20,000 00	1879	30,000 00				30,000 00
	Mar. 3, 1881	21	474	1	20,000 00	1880	20,000 00				20,000 00
Total					20,000 00	1881	20,000 00				20,000 00
					300,000 00	1882	20,000 00				20,000 00
<i>Archer's Hope River.</i>					300,000 00		300,000 00				300,000 00
For improving Archer's Hope River, Virginia.	Mar. 3, 1881	21	481	1	5,000 00	1882	5,000 00				5,000 00
<i>Aquia Creek.</i>											
For the improvement of Aquia Creek, Virginia.	June 10, 1872	17	373	1	1,500 00						
	Mar. 3, 1873	17	563	1	2,000 00	1873	600 00				600 00
	Mar. 3, 1875	18	459	1	2,000 00	1875	4,900 00				4,900 00
For completing the improvement.	June 18, 1878	20	152	1	5,000 00	1879	5,000 00				5,000 00
Total					10,500 00		10,500 00				10,500 00
<i>Blackwater River.</i>											
For improving Blackwater River, Virginia.	June 18, 1878	20	156	1	5,000 00	1879	5,000 00				5,000 00
	Mar. 3, 1879	20	364	1	2,500 00	1880	2,500 00				2,500 00
	June 14, 1880	21	185	1	3,500 00	1881	3,500 00				3,500 00
	Mar. 3, 1881	21	474	1	1,500 00	1882	1,490 36				1,490 36
Total					12,500 00		12,490 36				12,490 36
Balance										\$9 64	
<i>Chickahominy River.</i>											
For improving Chickahominy River, Virginia.	June 18, 1878	20	156	1	5,000 00	1879	5,000 00				5,000 00
	Mar. 3, 1879	20	365	1	1,000 00						
	June 14, 1880	21	185	1	2,000 00	1881	3,000 00				3,000 00
	Mar. 3, 1881	21	474	1	2,000 00	1882	500 00				500 00
Total					10,000 00		8,500 00				8,500 00
Balance										1,500 00	
<i>Den River.</i>											
Virginia and North Carolina. See "Miscellaneous," post.											
<i>Elizabeth River.</i>											
For making a survey of Deep Creek or branch of the South Branch of Elizabeth River, for the purpose of improving the navigation of the same, and an estimate of the cost.	Mar. 2, 1829	4	347		80 00	1829	80 00				24 10
	Mar. 3, 1873	17	563	1	15,000 00	1831	15,000 00	\$55 90		55 90	15,000 00
	June 23, 1874	18	240	1	10,000 00	1874	15,000 00				15,000 00
	Mar. 3, 1875	18	459	1	5,000 00	1875	12,000 00				12,000 00

For the improvement of the South Branch of Elizabeth River, Virginia.....	Aug. 14, 1876	19	135	1	5,000 00	1876	3,000 00					3,000 00
						1877	2,000 00					2,000 00
	June 18, 1878	20	153	1	5,000 00	1878	3,000 00					3,000 00
Total					40,080 00	1879	5,000 00					5,000 00
<i>Hampton River.</i> For improving Hampton River, Virginia.....	June 18, 1878	20	156	1	10,000 00	1879	6,000 00					6,000 00
	Mar. 3, 1879	20	365	1	2,000 00	1880	6,000 00					6,000 00
					12,000 00		12,000 00					12,000 00
<i>James and Appomattox Rivers.*</i> For a survey of the James River, with the view of improving the harbor of Richmond	July 4, 1836	5	130		500 00	1836	500 00					500 00
	Aug. 30, 1852	10	57		45,000 00	1853	2,500 00					2,500 00
						1854	21,000 00					21,000 00
For the improvement of the James and Appomattox Rivers below the cities of Richmond and Petersburg.....						1855	21,500 00					21,500 00
						1856		16	267 95	16	267 95	
						1859						
For the improvement of James River, in Virginia, and the removal of bars and obstructions from Richmond to and including Harrison's Bar, below the junction of the James and Appomattox Rivers.....	July 11, 1870	16	226		50,000 00							
	Mar. 3, 1871	16	540		50,000 00	1871	50,000 00					50,000 00
						1872	30,000 00					30,000 00
For the improvement of James River below Richmond.....	June 10, 1872	17	373	1	50,000 00	1873	30,000 00					30,000 00
	Mar. 3, 1873	17	563	1	75,000 00	1874	95,000 00					95,000 00
For the improvement of the James River.....	June 23, 1874	18	240	1	50,000 00							
	Mar. 3, 1875	18	459	1	50,000 00	1875	85,000 00					85,000 00
						1876	35,000 00					35,000 00
	Aug. 14, 1876	19	134	1	60,000 00	1877	45,000 00					45,000 00
						1878	15,000 00					15,000 00
	June 18, 1878	20	152	1	70,000 00	1879	70,000 00					70,000 00
	Mar. 3, 1879	20	364	1	75,000 00	1880	65,000 00					65,000 00
	June 14, 1880	21	185	1	75,000 00	1881	67,500 00					67,500 00
	Mar. 3, 1881	21	474	1	60,000 00	1882	77,500 00					77,500 00
Total					710,500 00		710,500 00	268 11	268 11			710,231 89
<i>Mattaponi River.</i> For improving Mattaponi River, Virginia.....	June 14, 1880	21	191	1	2,500 00	1881	2,500 00					2,500 00
	Mar. 3, 1881	21	474	1	3,300 00	1882	3,300 00					3,300 00
Total					5,800 00		5,800 00					5,800 00
<i>Nansemond River.</i> For the improvement of Nansemond River, Virginia	Mar. 3, 1873	17	564	1	15,000 00	1873	2,500 00					2,500 00
	June 23, 1874	18	240	1	10,000 00	1874	12,500 00					12,500 00
	Mar. 3, 1875	18	459	1	5,000 00	1875	12,000 00					12,000 00
	Aug. 14, 1876	19	135	1		1876	3,000 00					3,000 00
						1877	2,000 00					2,000 00
	June 18, 1878	20	153	1	2,000 00	1878	3,000 00					3,000 00
Total						1879	1,000 00					1,000 00
<i>Neabsco Creek.</i> For improving Neabsco Creek, Virginia.....					37,000 00		37,000 00					37,000 00
<i>Nece River.</i> For improving Nece River, Virginia.....	Mar. 3, 1881	21	480	1	5,000 00	1882	5,000 00					5,000 00

* See, also, "Appomattox River," ante.

Nece River. See "Miscellaneous," post.

[illegible]

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
WASHINGTON TERRITORY.										
Cowlitz River.	June 14, 1880	21	191	1	\$2,000 00	1881	\$2,000 00			\$2,000 00
For improving Cowlitz River, Washington Territory.....	Mar. 3, 1881	21	481	1	1,000 00	1882	1,000 00			1,000 00
Total					3,000 00		3,000 00			3,000 00
Skagit River.	June 18, 1880	21	190	1	2,500 00	1881	2,500 00			2,500 00
For improving Skagit River, Washington Territory										
WEST VIRGINIA.										
Elk River.	June 18, 1878	20	157	1	5,000 00	1879	2,750 00			2,750 00
For the improvement of Elk River, West Virginia	June 14, 1880	21	185	1	5,000 00	1881	2,250 00			2,250 00
	Mar. 3, 1881	21	471	1	5,000 00	1882	5,000 00			5,000 00
Total					15,000 00		15,000 00			15,000 00
NOTE.—The act of March 3, 1879 (20 Statutes, 370), provides, "That the sum of \$5,000 appropriated by act June 18, 1878 (20 Statutes, 157), is directed to be expended in the removal of obstructions to open navigation from Braxton Court-House to the mouth of Big Sandy: <i>Provided, however,</i> That not exceeding \$300 thereof may be expended for the improvement of steamboat navigation at Jarrett's Ford, but in no way to obstruct navigation by boats and rafts."										
Great Kanawha River.	Mar. 3, 1873	17	560	1	25,000 00	1873	5,000 00			5,000 00
For the improvement of Great Kanawha River, West Virginia	June 23, 1874	18	240	1	25,000 00	1874	20,000 00			20,000 00
	Mar. 3, 1875	18	458	1	300,000 00	1875	30,000 00			30,000 00
For the improvement of the Great Kanawha River, including the purchase of, and full payment for, sites for dams and locks, between the Great Falls and the Ohio River, not exceeding \$15,000						1876	50,000 00			50,000 00
For improving Great Kanawha River	Aug. 3, 1876	19	134	1	270,000 00	1877	100,000 00			100,000 00
						1878	195,000 00			195,000 00
For improving Great Kanawha River	June 18, 1878	20	152	1	222,000 00	1879	175,000 00			175,000 00
	Mar. 3, 1879	20	364	1	150,000 00	1880	365,000 00			365,000 00
For improving Great Kanawha River and operation of works	June 14, 1880	21	185	1	200,000 00	1881	142,000 00			142,000 00
	Mar. 3, 1881	21	475	1	200,000 00	1882	200,000 00			200,000 00
Total					1,392,000 00		1,282,000 00			1,282,000 00
Balance									\$410,000 00	
NOTE.—The act of June 10, 1879 (21 Statutes, 8), provides, "That such parts of the moneys heretofore appropriated by the act of March 3, 1879 (20 Statutes, 364), of which this is amendatory, for the improvement of the Great Kanawha River in West Virginia, and the Kentucky River in the State of Kentucky, as may be necessary in the prosecution of said improvements as undertaken, may be expended in the purchase, voluntary or by condemnation, as the case may be, of such sites as are necessary in the prosecution of said improvements: <i>Provided,</i> That such expenditure shall be under the direction of the Secretary of War: <i>And provided further,</i> That if the owners of such lands or sites shall refuse to sell the same at reasonable prices, then the prices to be paid shall be determined and the title and jurisdiction procured in the manner prescribed by the laws of the State in which such lands or sites are situated."										

NOTE.—The act of June 10, 1879 (21 Statutes, 8), provides, "That such parts of the moneys heretofore appropriated by the act of March 3, 1879 (20 Statutes, 364), of which this is amendatory, for the improvement of the Great Kanawha River in West Virginia, and the Kentucky River in the State of Kentucky, as may be necessary in the prosecution of said improvements as undertaken, may be expended in the purchase, voluntary or by condemnation, as the case may be, of such sites as are necessary in the prosecution of said improvements: *Provided,* That such expenditures shall be under the direction of the Secretary of War: And *provided further,* That if the owners of such lands or sites shall refuse to sell the same at reasonable prices, then the prices to be paid shall be determined and the title and jurisdiction procured in the manner prescribed by the laws of the State in which such lands or sites are situated."

<i>Guyandotte River.</i>									
For improving Guyandotte River, West Virginia	June 18, 1878	20	156	1	2,000 00	1879	2,000 00	.....	2,000 00
	Mar. 3, 1879	20	368	1	1,000 00	1880	1,000 00	.....	1,000 00
	June 14, 1880	21	185	1	2,000 00	1881	2,000 00	.....	2,000 00
	Mar. 3, 1881	21	475	1	3,500 00	1882	2,100 00	.....	2,100 00
Total					8,500 00		7,100 00	.....	7,100 00
Balance							1,400 00	.....
<i>Little Kanawha River.</i>									
For removal of Beaver and Nailor Bend rocks, and for cleaning out snags and fallen trees in the Little Kanawha, West Virginia	Aug. 14, 1876	19	134	1	7,300 00	1878	7,300 00	.....	7,300 00
For improving, dredging, removing obstructions, and for wing-dams, if required, Little Kanawha River	June 18, 1878	20	155	1	18,000 00	1879	10,000 00	.....	10,000 00
For improving Little Kanawha River, building additional lock and dam	Mar. 3, 1879	20	368	1	18,000 00	1880	26,000 00	.....	26,000 00
For improving Little Kanawha River: <i>Provided</i> , That no tolls shall be collected by the Little Kanawha Navigation Company for that part of the river improved by the general government	June 14, 1880	21	191	1	15,000 00	1881	5,000 00	.....	5,000 00
Total					40,000 00	1882	35,000 00	.....	35,000 00
Balance					98,300 00		83,300 00	.....	83,300 00
<i>Monongahela River.</i>									
West Virginia and Pennsylvania. See "Miscellaneous," <i>post</i>.								.....
<i>New River.</i>									
West Virginia and Virginia. See "Miscellaneous," <i>post</i>.								.....
<i>Ohio River.</i>									
West Virginia and Ohio. See "Miscellaneous," <i>post</i>.								.....
<i>Shenandoah River.</i>									
For improving Shenandoah River, West Virginia	June 14, 1880	21	192	1	15,000 00	1881	500 00	.....	187 80
For improving Shenandoah River, \$2,500; but this sum shall not be expended, nor shall the sum heretofore appropriated therefor be expended, until any corporate rights or franchises that may exist over said river shall have been relinquished to the United States to the satisfaction of the Secretary of War	Mar. 3, 1881	21	471	1	2,500 00	1882		\$312 20	
Total					17,500 00		500 00	312 20	187 80
Balance								17,312 20	
<i>WISCONSIN.</i>									
<i>Ahnapee Harbor.</i>									
For the improvement of Ahnapee Harbor, Wisconsin	Mar. 3, 1871	16	538	1	25,000 00	1872	25,000 00	.....	25,000 00
	June 10, 1872	17	370	1	25,000 00	1873	25,000 00	.....	25,000 00
	Mar. 3, 1875	18	456	1	25,000 00	1875	5,000 00	.....	5,000 00
	Aug. 3, 1876	19	133	1	8,000 00	1876	20,000 00	.....	20,000 00
	June 18, 1878	20	155	1	8,000 00	1877	4,000 00	.....	4,000 00
	Mar. 3, 1879	20	368	1	8,000 00	1878	4,000 00	.....	4,000 00
	June 14, 1880	21	183	1	7,000 00	1880	5,000 00	.....	5,000 00
	Mar. 3, 1881	21	472	1	8,000 00	1881	10,000 00	.....	10,000 00
Total					113,000 00	1882	7,000 00	.....	7,000 00
Balance							113,000 00	.....	113,000 00
<i>Chippewa River.</i>									
For the improvement of the Chippewa River, Wisconsin	Aug. 14, 1876	19	137	1	10,000 00	1877	5,000 00	.....	5,000 00
						1878	5,000 00	.....	5,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Chippewa River—Continued. For completing and protecting wing-dams and jetties now in course of construction upon the Chippewa River, in Wisconsin, in and near its mouth and below the lower point of Beef Island, \$10,000: <i>Provided</i> , That nothing herein shall be construed, nor shall any expenditure of this appropriation be made so as to affect existing legal or equitable rights in or upon the said Chippewa River or its branches, whether such rights arise under the laws of the United States or the State of Wisconsin.	June 18, 1878	20	158	1	\$10,000 00	1879	\$10,000 00			\$10,000 00
For the protection of the high sand banks on the Chippewa River, to prevent their erosion and deposition in the Mississippi River, \$8,000: <i>Provided</i> , That nothing shall be done, nor shall any improvement be made on the said Chippewa River, under or in pursuance of this act or the appropriation hereby made, which shall, directly or indirectly, prevent, interfere with, or obstruct the free navigation of the said river, as heretofore, by steamboats, or other water craft, or the free use thereof, as heretofore, for the running, floating, guiding, or sheering of loose logs, or rafts of lumber, or logs, upon or down the same, or which shall, directly or indirectly, prevent, obstruct, or interfere with the use of any slough, arm, or branch of the said river, as heretofore, for the holding, assorting, or rafting of logs therein.	Mar. 3, 1879	20	372	1	8,000 00	1880	8,000 00			8,000 00
For continuing the improvement of the Chippewa River, subject to the same conditions and limitations imposed by section 1 of the act approved March 3, 1879, for the improvement of rivers and harbors, relating to said Chippewa River.)	June 14, 1880	21	180	1	10,000 00	1881	5,000 00			5,000 00
	Mar. 3, 1881	21	473	1	10,000 00	1882	15,000 00			15,000 00
Total					48,000 00		48,000 00			48,000 00
NOTE. —The act of June 19, 1879 (21 Statutes, 23), authorizes the Secretary of War, in his discretion, to apply and use for the completion and protection of the wing-dams, jetties, and other improvements of the Chippewa River, State of Wisconsin, located at and near the mouth of said river, so much of the moneys appropriated by act of Congress, approved March 3, 1879, "For the protection of the high sand banks on the Chippewa River," &c., as may be required for such purpose herein provided.										
Fox and Wisconsin Rivers.										
For the improvement of the Wisconsin River, Wisconsin.....	July 11, 1870	16	225	1	100,000 00	1871	15,000 00			15,000 00
						1872	33,000 00			33,000 00
For the improvement of the Fox and Wisconsin Rivers.....	Mar. 3, 1873	17	560	1	300,000 00	1873	152,000 00			152,000 00
To pay the expenses incurred on the part of the United States in the arbitration had between the United States and the Green Bay and Mississippi Canal Company.....						1874	200,000 00			200,000 00
For payment to the Green Bay and Mississippi Canal Company for so much of all and singular its property and rights of property in and to the line of water communication between the Wisconsin River and the mouth of the Fox River, including its locks, dams, canals, and franchises, as were, under the act of Congress for the improvement of water communication between the Mississippi River and Lake Michigan by the Wisconsin and Fox Rivers, approved July 7, 1870, reported by the Secretary of War to be needed in his communication to the House of Representatives dated March 8, 1872.....	June 10, 1872	17	367	1	13,713 97	1872	13,713 97			13,713 97
						1873	6,713 97	\$6,713 97		
	June 10, 1872	17	370	1	145,000 00	1873	145,000 00			144,798 35
						1874		201 65		

For continuing the improvement of the Fox and Wisconsin Rivers, \$300,000; not exceeding \$25,000 of the above may be used for the purchase of such real estate as may be required, for the right of way, or for flowing, in the completion of the Fox and Wisconsin improvement.....	June 23, 1874 Mar. 3, 1875	18 18	237 456	1 1	300,000 00 500,000 00	1875 1876	375,000 00 375,000 00	\$201 65	375,000 00 375,000 00
For the improvement of the Fox and Wisconsin Rivers.....	Aug. 14, 1876 June 18, 1878 Mar. 3, 1879	19 20 20	136 156 368	1 1 1	270,000 00 250,000 00 150,000 00	1876 1877 1878 1879 1880	220,000 00 75,000 00 200,000 00 225,000 00		
For continuing improvement, \$125,000; of which \$50,000 shall be expended in continuing the improvement of the Wisconsin, and \$75,000 for continuing the improvement of the Fox River, of which last sum \$3,000 may, in the discretion of the engineers, be expended at the mouth of Fond du Lac.....	June 14, 1880	21	189	1	125,000 00	1881	125,000 00		125,000 00
For payment of J. Volney Sweeting, S. R. Reed, and J. C. Thompson, \$810 each; Eli Stilson, James H. Foster, and David M. Green, \$710 each; and Miles T. Alverson, \$450; in all \$5,010, for services rendered by them as commissioners appointed pursuant to an act of Congress approved March 3, 1875, to appraise damages to lands in the State of Wisconsin caused by the improvement of the Fox and Wisconsin Rivers. For improving Fox and Wisconsin Rivers; of which \$50,000 shall be expended in continuing the improvement of the Wisconsin River, and \$75,000 for continuing the improvement of the Fox River.....	June 16, 1880 Mar. 3, 1881	21 21	248 480	1 1	5,010 00 125,000 00	1881 1882	5,010 00 110,000 00		5,010 00 110,000 00
Total.....					2,283,723 97		2,275,437 94	201 65	2,268,522 32
Balance.....								15,000 00	
Green Bay Harbor.	June 23, 1866 Mar. 2, 1867	14 14	73 419	1 1	30,500 00 45,000 00	1867 1868 1869 1870	22,000 00 35,000 00 15,000 00 3,196 70		22,000 00 35,000 00 15,000 00 3,196 70
For the improvement of the harbor at Green Bay, mouth of Fox River, Wisconsin.....	July 11, 1870 Mar. 3, 1871 Mar. 3, 1873	16 16 17	223 538 560	1 1 1	17,500 00 17,500 00 20,000 00	1871 1872 1873 1874	17,603 30 17,700 00 10,000 00 10,000 00		17,603 30 17,700 00 10,000 00 10,000 00
For the improvement of Green Bay Harbor, Wisconsin.....	June 23, 1874 Mar. 3, 1875 Aug. 3, 1876 June 18, 1878 Mar. 3, 1879 June 14, 1880 Mar. 3, 1881	18 18 19 20 20 21 21	237 456 133 155 368 183 472	1 1 1 1 1 1 1	10,000 00 10,000 00 8,000 00 5,000 00 4,000 00 6,000 00 5,000 00	1875 1876 1877 1879 1880 1881 1882	10,000 00 10,000 00 8,000 00 5,000 00 4,000 00 9,000 00 2,000 00		10,000 00 10,000 00 8,000 00 5,000 00 4,000 00 9,000 00 2,000 00
Total.....					178,500 00		178,500 00		178,500 00
Kenosha Harbor (formerly Southport).	June 15, 1844	5	668	1	12,500 00	1844 1845	500 00 12,000 00		500 00 12,000 00
For the construction of a harbor at the town of Southport (now Kenosha), in the Territory of Wisconsin.....	Mar. 3, 1845 Aug. 30, 1852	5 10	748 58		15,000 00 10,000 00	1846 1853 1854	15,000 00 8,048 86 35 93		15,000 00 4,788 96
For the purpose of aiding in the completion of the harbor already commenced at the town of Southport.....	June 23, 1866	14	72		75,461 41	1855 1867 1868 1869 1870	5,211 04 35,000 00 37,006 46 3,000 00 27 06	3,295 83 5 83	5,205 21 35,000 00 37,006 46 3,000 00 27 06
For continuing the improvement of the harbor of Kenosha (formerly Southport), Wisconsin.....	July 11, 1870 Mar. 3, 1871	16 16	223 538		10,000 00 10,000 00	1871 1872	5,000 33 10,427 56		5,000 33 10,427 56

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Kenosha Harbor (formerly Southport)—Continued.	June 10, 1872	17	370	1	\$10,000 00	1873	\$15,000 00			\$15,000 00
	June 23, 1874	18	237	1	10,000 00					25,000 00
	Mar. 3, 1875	18	456	1	15,000 00	1875	25,000 00			5,150 00
	Aug. 3, 1876	19	136	1	8,000 00	1877	5,150 00			2,850 00
	June 18, 1878	20	155	1		1878	2,850 00			8,000 00
	Mar. 3, 1879	20	368	1	8,000 00	1879	8,000 00			5,000 00
	June 14, 1880	21	183	1	5,000 00	1880	5,000 00			5,000 00
	Mar. 3, 1881	21	472	1	5,000 00	1881	5,000 00			5,000 00
						1882	5,000 00			
	Total					198,961 41	202,257 24	\$3,301 66	\$5 83	198,955 58
Keweenaw Harbor.	Mar. 3, 1881	21	480	1	5,000 00	1882	5,000 00			5,000 00
For improving Keweenaw Harbor, Wisconsin.	Aug. 30, 1852	10	58		8,000 00	1853	39 13			39 13
	June 23, 1866	14	73			1854	5,169 74			5,169 74
	Mar. 2, 1867	14	419	1	52,000 00	1855	2,791 13			2,791 13
	July 11, 1870	16	223	1						45,000 00
	Mar. 3, 1871	16	538	1	45,000 00	1867	45,000 00			35,006 07
	Mar. 3, 1873	17	560	1		1868	35,006 07			16,500 00
	June 23, 1874	18	237	1		1869	16,500 00			72 08
	Mar. 3, 1875	18	456	1		1870	72 08	8 17		63 91
	Aug. 3, 1876	19	135	1	20,000 00					20,030 02
	June 18, 1878	20	155	1	11,000 00	1871	20,030 02			11,400 00
For the improvement of the harbor of Manitowoc, Wisconsin.	Mar. 3, 1873	17	560	1	20,000 00	1873	11,400 00			20,000 00
	June 23, 1874	18	237	1		1874	20,000 00			
	Mar. 3, 1875	18	456	1	10,000 00					10,000 00
	Aug. 3, 1876	19	135	1	10,000 00	1875	10,000 00			10,000 00
	June 18, 1878	20	155	1	8,000 00	1876	10,000 00			8,000 00
	Mar. 3, 1879	20	368	1	15,000 00	1877	8,000 00			15,000 00
	June 14, 1880	21	183	1	6,500 00	1879	15,000 00			3,000 00
	Mar. 3, 1881	21	472	1		1880	3,000 00			7,000 00
	July 4, 1836	5	131		7,000 00	1881	10,500 00			4,000 00
	Mar. 3, 1843	5	619		4,000 00	1882	4,000 00			
Total					216,500 00	216,508 17	8 17		216,500 00	
Memomonee Harbor.	Wisconsin and Michigan. See "Miscellaneous," post.									
	Milwaukee Harbor.	July 4, 1836	5	131	400 00	1836	400 00			
	For the survey of the mouth of Milwaukee River, on Lake Michigan, to determine the practicability of making a harbor by deepening the channel.					1837		400 00		
	For the construction of a harbor at the most suitable situation at or near Milwaukee, to be made under the survey of an officer to be appointed by the Secretary of War.	Mar. 3, 1843	5	619	15,000 00	1838				
	For continuing the works at the harbor at Milwaukee	Mar. 3, 1843	5	619	15,000 00	1843	3,000 00			3,000 00
	For continuing the improvement of the harbor of Milwaukee, Wisconsin, to be expended at the point on the Milwaukee River, known as the "North Cut," surveyed by Lieutenant Centro	June 11, 1844	5	662	20,000 00					26,646 06
						1844	27,000 00	353 94		19,534 00
						1845	19,534 00			656 00
						1846	656 00			
		Aug. 30, 1852	10	58	15,000 00					

For harbor at Milwaukee	Mar. 3, 1853	10	184		163 94	1853	6, 073 33	4, 055 27	163 94	6, 073 33
						1854	8, 446 88			4, 331 61
						1855	4, 639 00			4, 639 00
						1857	250 58	260 58		
	June 23, 1866	14	73		48, 983 51	1863	10, 000 00			10, 000 00
						1869	20, 000 00			20, 000 00
	July 11, 1870	16	223		40, 000 00	1870	18, 042 40	39 00		18, 003 40
	Mar. 3, 1871	16	538		38, 000 00	1871	5, 005 17			5, 005 17
	Mar. 3, 1873	17	560	1	10, 000 00	1872	58, 274 94			58, 274 94
	June 23, 1874	18	242	1	10, 000 00	1873	25, 000 00			25, 000 00
For improvement of harbor at Milwaukee	Mar. 3, 1875	18	456	1	25, 000 00	1875	15, 000 00			15, 000 00
	Ang. 3, 1876	19	136	1	26, 000 00	1876	20, 000 00			20, 000 00
	June 18, 1878	20	155	1	15, 000 00	1877	15, 000 00			15, 000 00
	Mar. 3, 1879	20	368	1	7, 500 00	1878	11, 000 00			11, 000 00
	June 14, 1880	21	183	1	10, 000 00	1879	15, 000 00			15, 000 00
	Mar. 3, 1881	21	473	1	100, 000 00	1880	7, 500 00			7, 500 00
						1881	10, 500 00			10, 500 00
	Mar. 3, 1881	21	472	1	8, 000 00	1882	97, 500 00			97, 500 00
	Total				403, 347 45		307, 892 30	5, 108 79	563 94	392, 783 51
	Balance								10, 000 00	
For improving Milwaukee Bay, for purposes of harbor of refuge. For improving harbor at Milwaukee, extension and repairs of piers and dredging										
	Mar. 3, 1859	5	328	1	2, 000 00	1839	2, 000 00	135 21		1, 844 79
						1852				
						1853			155 21	
	Mar. 3, 1859	5	330		500 00	1841	500 00			500 00
	Total				2, 500 00		2, 500 00	155 21	155 21	2, 344 79
	Balance									
	For improving harbor at Oconto, Wis.	21	472	1	10, 000 00					
	Balance								10, 000 00	
For the improvement of Port Washington Harbor, Wisconsin.	July 11, 1870	16	223	1	15, 000 00	1871	7, 500 00			7, 500 00
	Mar. 3, 1871	16	538	1	15, 000 00	1872	22, 500 00			22, 500 00
	June 10, 1872	17	370	1	15, 000 00					
	Mar. 3, 1873	17	560	1	15, 000 00	1873	15, 000 00			15, 000 00
	June 23, 1874	18	237	1	10, 000 00	1874	15, 000 00			15, 000 00
	Mar. 3, 1875	18	456	1	10, 000 00	1875	10, 000 00			10, 000 00
	Ang. 3, 1876	19	135	1	8, 000 00	1876	10, 000 00			10, 000 00
	June 18, 1878	20	155	1	5, 000 00	1877	3, 000 00			3, 000 00
	Mar. 3, 1879	20	368	1	7, 500 00	1878	5, 000 00			5, 000 00
	June 14, 1880	21	183	1	20, 000 00	1879	7, 000 00			7, 000 00
For the improvement of Port Washington Harbor, Wisconsin.	Mar. 3, 1881	21	472	1	17, 000 00	1880	5, 500 00			5, 500 00
						1881	20, 000 00			20, 000 00
	Total				137, 500 00	1882	17, 000 00			17, 000 00
	Balance						137, 500 00			137, 500 00
	June 15, 1844	5	663	1	12, 500 00	1845	12, 500 00			12, 500 00

Racine Harbor.

To aid in the completion of a harbor already commenced by the citizens of the town of Racine at the mouth of the Root River, in the Territory of Wisconsin

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditure.
		Volume.	Page.	Section.						
<i>Lacine Harbor</i> —Continued.	Aug. 30, 1832	10	58	.....	\$10,000 00	1853	\$48 86	.....	.....	\$48 86
	.....	.....	.....	.....	.....	1854	8,035 93	.....	.....	6,072 84
	June 23, 1866	14	73	.....	23,910 00	1855	3,878 30	\$1,963 09	\$1 67	3,876 63
	Mar. 2, 1867	14	419	.....	45,000 00	1867	24,500 00	.....	.....	24,500 00
	.....	.....	.....	.....	.....	1868	35,000 23	.....	.....	35,000 23
	.....	.....	.....	.....	.....	1869	5,000 00	.....	.....	5,000 00
	July 11, 1870	16	223	.....	.....	1870	4,107 10	.....	.....	4,107 10
	Mar. 3, 1871	16	538	.....	10,000 00	1871	507 19	.....	.....	507 19
	Mar. 3, 1873	17	560	.....	20,000 00	1872	19,735 48	.....	.....	19,735 48
	June 23, 1874	18	237	1	10,000 00	1874	20,000 00	.....	.....	20,000 00
For continuing the improvement of the harbor of Racine.....	Mar. 3, 1875	18	456	1	10,000 00	1875	15,000 00	.....	.....	15,000 00
	.....	.....	.....	.....	.....	1876	5,000 00	.....	.....	5,000 00
	Aug. 3, 1876	19	138	1	8,000 00	1877	5,000 00	.....	.....	5,000 00
	.....	.....	.....	.....	.....	1878	3,000 00	.....	.....	3,000 00
	June 18, 1878	20	155	1	10,000 00	1879	10,000 00	.....	.....	10,000 00
	Mar. 3, 1879	20	368	1	6,000 00	1880	6,000 00	.....	.....	6,000 00
	June 14, 1880	21	183	1	6,000 00	1881	6,000 00	.....	.....	6,000 00
	Mar. 3, 1881	21	472	1	6,000 00	1882	6,000 00	.....	.....	6,000 00
	.....	.....	.....	.....	187,410 00	.....	189,373 09	1,964 76	1 67	187,408 33

<i>Rock River.</i> Wisconsin and Illinois. See "Miscellaneous," post.	Aug. 30, 1852	10	58	.....	10,000 00	1853	48 86	.....	.....	48 86
	.....	.....	.....	.....	.....	1854	1,575 93	179 79	.....	1,396 14
	.....	.....	.....	.....	.....	1855	8,555 00	.....	.....	7,615 00
	.....	.....	.....	.....	.....	1857	5,199 30	6,139 30	.....	.....
	June 23, 1866	14	73	1	47,598 91	1859	940 00	.....	.....	940 00
	Mar. 2, 1867	14	419	1	8,000 00	1867	27,000 00	.....	.....	27,000 00
	.....	.....	.....	.....	.....	1868	24,000 00	.....	.....	24,000 00
	.....	.....	.....	.....	.....	1869	3,000 00	.....	.....	3,000 00
	.....	.....	.....	.....	.....	1870	1,298 54	.....	.....	1,298 54
	July 11, 1870	16	223	1	15,000 00	1871	530 22	.....	.....	530 22
For the improvement of the harbor of Sheboygan, Wisconsin..	Mar. 3, 1871	16	538	1	15,000 00	1872	29,770 15	.....	.....	29,770 15
	.....	.....	.....	.....	.....	1873	18,000 00	.....	.....	18,000 00
	June 10, 1872	17	370	1	10,000 00	1874	10,000 00	.....	.....	10,000 00
	Mar. 3, 1873	17	560	1	10,000 00	1875	10,000 00	.....	.....	10,000 00
	.....	.....	.....	.....	.....	1876	12,000 00	.....	.....	12,000 00
	June 23, 1874	18	237	1	10,000 00	1877	6,000 00	.....	.....	6,000 00
	Mar. 3, 1875	18	456	1	12,000 00	1879	4,000 00	.....	.....	4,000 00
	.....	.....	.....	.....	.....	1880	2,000 00	.....	.....	2,000 00
	Aug. 3, 1876	19	135	1	6,000 00	1881	5,000 00	.....	.....	5,000 00
	June 18, 1878	20	155	1	4,000 00	.....	.....	.....	.....	.....
For improving harbor of Sheboygan, repairs and dredging	Mar. 3, 1879	20	368	1	3,000 00	.....	.....	.....	.....	.....
	.....	.....	.....	.....	7,000 00	.....	.....	.....	.....	.....
	June 14, 1880	21	183	1	.....	.....	.....	.....	.....	.....

For repairs, dredging, and extension of piers.....	Mar. 3, 1881	21	472	1	25,000 00	1882	21,000 00	.....	21,000 00
Total.....					190,598 91	.....	189,918 00	6,319 09	183,598 91
Balance .....					.....	.....	.....	7,000 00	.....
<i>Southport Harbor.</i> See "Kenosha Harbor," ante.									
<i>Sturgeon Bay—Harbor of Refuge.</i>									
For the improvement of the harbor of refuge at the entrance of the Sturgeon Bay Canal, Wisconsin	Mar. 3, 1873	17	562	1	40,000 00	1873	20,000 00	.....	20,000 00
	June 23, 1874	18	237	1	10,000 00	1874	20,000 00	.....	20,000 00
	June 18, 1878	20	155	1	30,000 00	1875	10,000 00	.....	10,000 00
	Mar. 3, 1879	20	368	1	30,000 00	1879	23,000 00	.....	23,000 00
					.....	1880	20,000 00	.....	20,000 00
					.....	1881	17,000 00	.....	17,000 00
For continuing the improvement of the harbor of refuge at en- trance of Sturgeon Bay Canal: <i>Provided</i> , That said sum shall not be expended until any private or corporate right which may exist to impose charges for the use of said harbor shall have been relinquished in manner satisfactory to the Secre- tary of War	June 14, 1880	21	183	1	10,000 00	.....	.....	.....	.....
	Mar. 3, 1881	21	472	1	10,000 00	1881	12,000 00	.....	12,000 00
					.....	1882	8,000 00	.....	8,000 00
For continuing the improvement .....					.....	.....	.....	.....	.....
Total					130,000 00	.....	130,000 00	.....	130,000 00
<i>Superior Bay.</i> For the purpose of dredging out the bay of Superior, from the natural entrance to the docks of Superior and Duluth, and preserving both entrances from the lake thereto	Mar. 3, 1873	17	560	1	100,000 00	1873	20,364 00	.....	20,364 00
	Aug. 3, 1876	19	133	1	3,000 00	1874	79,636 00	.....	79,636 00
	June 18, 1878	20	155	1	3,000 00	1877	1,500 00	.....	1,500 00
	Mar. 3, 1879	20	364	1	5,000 00	1879	4,500 00	.....	4,500 00
	June 14, 1880	21	183	1	5,000 00	1880	1,000 00	.....	1,000 00
	Mar. 3, 1881	21	472	1	5,000 00	1881	4,000 00	.....	4,000 00
For improving Superior Bay, dredging for improvement of natural entrance, and for repairing existing works					10,000 00	1882	15,000 00	.....	15,000 00
Total.....					126,000 00	.....	126,000 00	.....	126,000 00
<i>Superior City Harbor.</i>									
For improving the harbor at Superior City, Wisconsin.....	Mar. 2, 1867	14	419	1	63,000 00	1868	20,000 00	.....	20,000 00
	July 11, 1870	16	223	1	40,000 00	1869	42,500 00	.....	42,500 00
	Mar. 3, 1871	16	538	1	60,000 00	1870	70 94	4 65	66 29
	June 10, 1872	17	370	1	50,000 00	1871	10,507 18	.....	10,507 18
					.....	1872	89,926 53	.....	89,926 53
					.....	1873	50,000 00	.....	50,000 00
Total					213,004 65	.....	213,004 65	4 65	213,000 00
<i>Two Rivers Harbor.</i>									
For the improvement of Two Rivers Harbor, Wisconsin	Mar. 3, 1871	16	538	1	25,000 00	1872	25,000 00	.....	25,000 00
	June 10, 1872	17	370	1	25,000 00	.....	.....	.....	.....
	Mar. 3, 1873	17	560	1	25,000 00	1873	25,000 00	.....	25,000 00
	June 23, 1874	18	237	1	15,000 00	1874	25,000 00	.....	25,000 00
	Mar. 3, 1875	18	456	1	15,000 00	1875	15,000 00	.....	15,000 00
	Aug. 3, 1876	19	133	1	5,000 00	1876	15,000 00	.....	15,000 00
	June 18, 1878	20	155	1	10,000 00	1877	5,000 00	.....	5,000 00
	Mar. 3, 1879	20	368	1	20,000 00	1879	10,000 00	.....	10,000 00
	June 14, 1880	21	183	1	20,000 00	1880	15,000 00	.....	15,000 00
	Mar. 3, 1881	21	472	1	20,000 00	1881	25,000 00	.....	25,000 00
Total					175,000 00	.....	175,000 00	.....	175,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
Winnebago Lake.	Mar. 3, 1839	5	330		\$500 00	1839	\$500 00			\$382 12
For building a pier at the northern extremity of Winnebago Lake, in the Territory of Wisconsin						1852		\$117 88	\$117 88	
						1853				
Total					500 00		500 00	117 88	117 88	382 12
Wisconsin River.	Mar. 2, 1867	14	421	1	40,000 00	1867	5,000 00			5,000 00
For building and operating one dredge or snag-boat on the Wisconsin River						1868	30,000 00			30,000 00
						1870	178 48			178 48
						1871	4,199 28			4,199 28
						1872	622 24			622 24
Total					40,000 00		40,000 00			40,000 00
DISTRICT OF COLUMBIA.										
Potomac River.	Mar. 3, 1849	9	365	1	1,500 00	1850	1,500 00			1,208 61
To enable the Secretary of War to execute the survey and examination of the Potomac River, ordered by a resolution of the House of Representatives of the 8th of August, 1848						1851		288 64		
	July 11, 1870	16	226	1	50,000 00	1852		2 75	291 39	
For the improvement of the Potomac River between the Long Bridge, in Washington, and the city of Georgetown, D. C.						1871	35,000 00			35,000 00
						1872	15,000 00			14,993 39
						1873		6 61	6 61	
	Mar. 3, 1873	17	560	1	50,000 00	1877				
For the improvement of the harbors of Washington and Georgetown, D. C.						1874	5,000 00			5,000 00
						1875	30,000 00			30,000 00
						1876	8,000 00			8,000 00
						1877	7,000 00			7,000 00
For improving the harbors and channels at Washington and Georgetown, D. C., \$50,000; of which \$20,000 is to be expended in the Washington Harbor and channel below Long Bridge, and \$30,000 to be expended in Georgetown Harbor and channel										
For improving the harbors and channels at Washington and Georgetown, continuing the improvements, including the removal of rocks	June 18, 1878	20	159	1	50,000 00	1879	30,000 00			30,000 00
For improving the harbors and channels at Washington and Georgetown	Mar. 3, 1879	20	364	1	50,000 00	1880	40,000 00			40,000 00
	June 14, 1880	21	181	1	40,000 00	1881	11,000 00			11,000 00
	Mar. 3, 1881	21	470	1	50,000 00	1882	71,000 00			71,000 00
Total					291,500 00		253,500 00	298 00	298 00	253,202 00
Balance									38,000 00	
MISCELLANEOUS.										
Arkansas River—Arkansas, Indian Territory, and Kansas.										
For improving the navigation of the Arkansas River: <i>Provided</i> , The Engineer Department, after due examination, is satisfied that, during a portion of the ensuing year, the men and machine now employed in removing obstructions in the Ohio and Mississippi Rivers, can be more usefully employed in removing those of the Arkansas River: <i>Provided</i> , That the compensation of the superintendent of the Ohio and Missis-	July 3, 1832	4	553	1	15,000 00	1833	15,681 64	681 64		14,962 00
						1834		38 00	38 00	

Mississippi Rivers, shall be the sum of \$3,000 per annum, in full for all his services; and he shall not hereafter be allowed anything in the shape of commissions in his disbursements. For improving the navigation of the Arkansas River, and for constructing a beat with an iron hull. For continuing the works for the removal of the obstructions to the navigation of the Arkansas River, in addition to the unexpended balance.

For the improvement of the Arkansas River

For the improvement of the navigation of the Arkansas River.

For improvement of Arkansas River between Fort Smith, Arkansas, and Wichita, Kans.....

For improving Arkansas River at Pine Bluff, Ark

For improving Arkansas River between Fort Smith, Arkansas, and Wichita, Kans

Total.

Balance -

Bayou Bartholomew—Arkansas and Louisiana.

For improving Bayou Bartholomew.

Total

Black River—Arkansas and Missouri.

For improving Black River, Arkansas.

For improving Black River, Arkansas and Missouri, to be applied from Poplar Bluff.....

Total

Chattahoochee and Flint Rivers—Alabama, Florida, and Georgia.

For continuing the improvement of Chattahoochee River from Cedar Bluff to the Big Spring, in Florida, according to the report of the assistant quartermaster charged with the superintendence of the removal of obstructions

For improving the Chattahoochee and Flint Rivers, Georgia..

For improving Chattoahoochee River, Alabama and Georgia...

For improving Chattahoochee River, Georgia.

Total

Balance.

Choctawhatchee River—Alabama and Florida.

For improving the navigation of the Choctawhatchee River, as recommended by the Postmaster-General, for the transportation of the mail from Pensacola to Tallahassee.....

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

<i>Columbia River—Oregon and Washington Territory.</i>									
For the improvement of the Upper Columbia River, Oregon..	June 10, 1872	17	375	1	50,000 00	1873	41,000 00	.....	41,000 00
	June 23, 1874	18	242	1	20,000 00	1874	9,000 00	.....	9,000 00
	Mar. 3, 1875	18	460	1	35,000 00	1875	20,000 00	.....	20,000 00
						1876	25,000 00	.....	25,000 00
For the improvement of the Upper Columbia River, including Snake River.....	Aug. 14, 1876	19	135	1	15,000 00	1877	25,000 00	.....	25,000 00
For the improvement of the mouth of Columbia River, \$5,000; the same or so much thereof as may be necessary, to be expended under the direction of the Secretary of War in making a thorough survey of the bar at the mouth of said river, in the preparation of a plan and estimates for its permanent improvement; any balance to be used in the temporary improvement of said bar	June 18, 1878	20	157	1	5,000 00	.....	.....	.....	.....
	June 18, 1878	20	157	1	20,000 00	1879	25,000 00	.....	25,000 00
	Mar. 3, 1879	20	370	1	20,000 00	.....	.....	.....	.....
For improving Upper Columbia River, including Snake River	Mar. 3, 1879	20	370	1	5,000 00	1880	20,000 00	.....	20,000 00
For continuing the survey and observation of currents at the bar of the mouth of the Columbia River.....	June 14, 1880	21	189	1	15,000 00	1881	20,000 00	.....	20,000 00
	Mar. 3, 1881	21	479	1	15,000 00	1882	15,000 00	.....	15,000 00
For improving Upper Columbia River, including Snake River					200,000 00	.....	200,000 00	.....	200,000 00
Total .....						.....		.....
<i>Cumberland River—Kentucky and Tennessee.</i>									
For the improvement of the navigation of the Cumberland River, to be expended under the direction of the War Department	July 3, 1832	4	533	1	30,000 00	1832	10,000 00	.....	10,000 00
	June 23, 1834	4	704	.....	30,000 00	1833	17,000 00	.....	17,000 00
						1834	10,500 00	.....	10,500 00
For continuing the improvement of the Cumberland River, in Kentucky and Tennessee.....	July 2, 1836	5	68	.....	20,000 00	1835	15,000 00	.....	15,000 00
For continuing the improvement of the Cumberland River, in Kentucky and Tennessee, according to the report of Colonel Abert, United States Engineer, dated February 23, 1835, of the survey of said river	Mar. 3, 1877	5	190	1	55,000 00	1837	31,500 00	.....	31,500 00
	July 7, 1838	5	270	1	20,000 00	1838	29,500 00	.....	29,500 00
						1839	19,000 00	.....	19,000 00
For continuing the improvement of the Cumberland River, in Kentucky and Tennessee.....						1840	500 00	.....	500 00
						1845	.....	.....	.....
	Mar. 3, 1871	16	541	1	30,000 00	1848	.....	519 92	519 92
	June 10, 1872	17	372	1	20,000 00	1872	20,000 00	.....	20,000 00
	Mar. 3, 1873	17	563	1	25,000 00	1873	20,000 00	.....	20,000 00
	Mar. 3, 1875	18	458	1	25,000 00	1874	10,000 00	.....	10,000 00
						1875	25,000 00	.....	25,000 00
						1876	20,018 00	.....	20,018 00
For improvement of the Cumberland River below Nashville. For the improvement of Cumberland River, in Tennessee.....	Aug. 14, 1876	19	134	1	52,000 00	1877	29,982 00	.....	29,982 00
						1878	27,000 00	.....	27,000 00
For the improvement of Cumberland River below Nashville..	June 18, 1878	20	154	1	60,000 00	1879	98,000 00	.....	98,000 00
	June 18, 1878	20	154	1	45,000 00	.....	.....	.....	.....
	Mar. 3, 1879	20	367	1	40,000 00	.....	.....	.....	.....
For the improvement of the Cumberland River above the city of Nashville, Tenn., from Nashville to the Kentucky line, \$15,000; and thence to the foot of Smith's Shoals, \$10,000; and for Smith's Shoals, \$25,000; and from Smith's Shoals to the Falls of the Cumberland, \$2,000	Mar. 3, 1879	20	367	1	39,000 00	1880	86,000 00	.....	86,000 00
For the improvement of the Cumberland River above Nashville. For improving Cumberland River below Nashville.....	June 14, 1880	21	187	1	45,000 00	.....	.....	.....	.....
	June 14, 1880	21	187	1	20,000 00	1881	20,000 00	.....	20,000 00
	Mar. 3, 1881	21	477	1	15,000 00	.....	.....	.....	.....
For improving Cumberland River above Nashville, as follows: From Nashville to the Kentucky line, \$15,000; from Kentucky line to Smith's Shoals, \$10,000; at Smith's Shoals, \$20,000.....	Mar. 3, 1881	21	477	1	40,000 00	1881	48,000 00	.....	48,000 00
						1882	37,000 00	.....	37,000 00
For improving Cumberland River above Nashville. For improving Cumberland River below Nashville.....	Mar. 3, 1881	21	480	1	10,000 00	1882	25,000 00	.....	25,000 00
						.....	621,000 00	510 92	519 92
Total .....						.....	621,000 00	.....	620,480 08

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Cumberland Sound—Georgia and Florida.</i> For improving the entrance to Cumberland Sound, between Amelia and Cumberland Islands, in the States of Florida and Georgia, according to the plans and estimates of General Gillmore, the chief engineer, reported to this Congress.....	June 14, 1880 Mar. 3, 1881	21 21	193 476	1 1	\$30,000 00 100,000 00	1881 1882	\$5,000 00 125,000 00			\$5,000 00 125,000 00
Total					130,000 00		130,000 00			130,000 00
<i>Current River—Arkansas and Missouri.</i> For the improvement of Current River, Missouri..... For improving Current River, from Donithan to its mouth, Arkansas and Missouri	June 10, 1872 Mar. 3, 1881	17 21	372 480	1 1	5,000 00 2,000 00	1873 1882	5,000 00 2,000 00			5,000 00 2,000 00
Total					7,000 00		7,000 00			7,000 00
<i>Cypress Bayou—Louisiana and Texas.</i> For the improvement of Cypress Bayou, near Jefferson, Tex..... For the improvement of Cypress Bayou, and construction of dams and dredging at the foot of Soda Lake..... For continuing the work of dredging and removing obstructions to navigation in Cypress Bayou..... For improving Cypress Bayou, Texas and Louisiana.....	June 10, 1872 Mar. 3, 1873 Aug. 14, 1876 June 18, 1878 Mar. 3, 1879	17 17 19 20 20	373 563 134 133 366	1 1 1 1 1	10,000 00 50,000 00 13,000 00 15,000 00 6,000 00	1873 1874 1875 1876 1878 1879 1880 1882	22,000 00 25,000 00 13,000 00 10,600 00 2,400 00 15,000 00 3,000 00 1,500 00			22,000 00 25,000 00 13,000 00 10,600 00 2,400 00 15,000 00 3,000 00 1,500 00
Total					94,000 00		92,500 00			92,500 00
Balance									\$1,500 00	
<i>Dan River—Virginia and North Carolina.</i> For improving Dan River between Danville, Va., and Madison, N. C.	June 14, 1880 Mar. 3, 1881	21 21	191 474	1 1	10,000 00 8,000 00	1881 1882	5,000 00 13,000 00			5,000 00 13,000 00
Total					18,000 00		18,000 00			18,000 00
<i>Delaware River—Delaware, New Jersey, New York, and Pennsylvania.</i> For removing the bar on the Delaware River, in the neighborhood of Fort Mifflin, with the view of improving the harbor of Philadelphia..... For the improvement of Delaware River between Trenton and Bordentown, N. J. For the improvement of the channel of the Delaware River at Fort Mifflin Bar	July 4, 1836 June 10, 1872 Mar. 3, 1873	5 17 17	130 374 564	1 1 1	15,000 00 10,000 00 15,000 00	1836 1838	13 80		\$14,986 20	13 80
For the improvement of the channel of the Delaware River at Fort Mifflin Bar	Mar. 3, 1873	17	564	1	50,000 00					
For the improvement of the channel of the Delaware River at and near the Horseshoe Shoals; the work not to be commenced until an examination and survey has been made by a board of engineers of the United States Army, appointed by the Secretary of War, and a favorable report upon the feasibility and expense of the plan adopted for the prevention and removal of the obstructions.....	Mar. 3, 1873	17	564	1	50,000 00	1873 1874	8,000 00 48,000 00			8,000 00 48,000 00
For continuing the improvement of the Delaware River and channel at Fort Mifflin Bar	June 23, 1874	18	240	1	50,000 00					

	June 23, 1874	18	240	1	10,000 00							
For continuing the improvement of the Delaware River between Trenton and Bordentown												
For the improvement of Delaware River at Fort Mifflin Bar; and any unexpended balance of the amount mentioned in the act making appropriations for the repair, preservation, &c., of certain public works, &c., approved March 3, 1873, for the improvement of the channel of the Delaware River, at and near the Horseshoe Shoals, be, and is hereby appropriated, to be expended for the improvement of said river, at such places between Petty's Island and its mouth as the Chief of Engineers of the Army may order and direct.....	Mar. 3, 1875	18	459	1	20,000 00	1875	77,500 00					77,500 00
For the improvement of the Delaware River, New Jersey, between Trenton and White Hill.....	Mar. 3, 1875	18	459	1	10,000 00	1876	81,500 00					81,500 00
For the improvement of the Delaware River below Petty's Island.....	Aug. 14, 1876	19	135	1	40,000 00	1877	22,500 00			\$2,007 68		22,500 00
For improving Delaware River between Trenton and White Hill, N. J.						1878	19,507 68					17,500 00
For improving Delaware River below Bridesburg	June 18, 1878	20	159	1	10,000 00							55,000 00
For improving Delaware River between Trenton and White Hill	June 18, 1878	20	159	1	100,000 00	1879	55,000 00					
For improving Delaware River at or near Cherry Island Flats.....	Mar. 3, 1879	20	364	1	45,000 00							
For improving Delaware River at Schooner Ledge.....	Mar. 3, 1879	20	364	1	6,000 00							
For improving Delaware River below Bridesburg.....	Mar. 3, 1879	20	372	1	100,000 00							246,000 00
For improving Delaware River at Schooner Ledge.....	Mar. 3, 1879	20	372	1	50,000 00	1880	246,000 00					
For improving Delaware River below Bridesburg, Pa.; of which \$40,000 shall be expended at or near Petty's Island, between said island and Philadelphia, and \$10,000 at or near Smith's Island, between Philadelphia and Camden, through the sand-spit	June 14, 1880	21	184	1	40,000 00							
For improving Delaware River near Cherry Island Flats	June 14, 1880	21	184	1	85,000 00							
For improving Delaware River between Trenton, N. J., and Bridesburg, Pa.; continuing operations	June 14, 1880	21	184	1	100,000 00							
For improving Delaware River at Schooner Ledge	Mar. 3, 1881	21	473	1	10,000 00	1881	209,640 00					209,640 00
For improving Delaware River near Cherry Island Flats	Mar. 3, 1881	21	473	1	40,000 00							
For improving Delaware River below Bridesburg	Mar. 3, 1881	21	473	1	100,000 00							197,360 00
Total	Mar. 3, 1881	21	473	1	100,000 00	1882	197,360 00					
Balance					1,006,000 00		965,021 48	2,007 68	14,986 20			963,013 80
									88,000 00			
<i>Entrances to the Dismal Swamp Canal.—North Carolina and Virginia.</i>												
For improving the navigation of the natural channels at the northern and southern entrances of the Dismal Swamp Canal. } For making a survey from the southern debouche of the Dismal Swamp Canal, down the Pasquotank River to Elizabeth, thence to Croatan Sound, Pamlico and other sounds, near the coast of North Carolina, and thence by the most practicable route to Winyaw Bay, in South Carolina, with a view to determine the practicability of opening an inland communication for steam navigation, from the Chesapeake Bay to Charleston, S. C.	July 4, 1836	5	130		15,000 00	1836 1837	5,000 00 2,800 00					5,000 00 2,800 00
For improving the natural channels at the northern and southern entrances of the Dismal Swamp Canal.....	Mar. 3, 1837	5	190		10,000 00	1837	10,000 00					10,000 00
	July 7, 1838	5	270		10,000 00	1838	6,000 00					6,000 00
						1839	11,200 00					11,161 92
						1840	1,169 90	1,169 90				
						1840		38 08				
Total					35,000 00		36,169 90	1,207 98	38 08			34,961 92
<i>Escambia River.—Alabama and Florida.</i>												
For removing obstructions in, and improving the navigation of, the Escambia River	Mar. 2, 1833	4	645		5,000 00	1833 1834	2,150 00 2,850 00					2,150 00 2,850 00
For continuing the removal of obstructious in, and improving the navigation of, the Escambia River, in the Territory of Florida.....	July 2, 1836	5	69		5,500 00	1838						
For improving Escambia River, Florida and Alabama.....	June 14, 1880	21	191	1	8,000 00	1881	8,000 00					8,000 00
	Mar. 3, 1881	21	476	1	5,000 00	1882	5,000 00					5,000 00
Total					23,500 00		18,000 00			5,500 00		18,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>French Broad River—Tennessee and North Carolina.</i>										
For the improvement of French Broad River between Brevard and the Buncombe County line, North Carolina.....	Aug. 14, 1876	19	134	1	\$10,000 00	1877	\$3,000 00			\$3,000 00
	June 18, 1878	20	153	1	15,000 00	1878	7,000 00			7,000 00
	Mar. 3, 1879	20	365	1	5,000 00	1879	9,000 00			9,000 00
For improving French Broad River, North Carolina, continuing improvement	June 14, 1880	21	185	1	3,000 00	1880	11,000 00			11,000 00
	Mar. 3, 1881	21	475	1	5,000 00	1881	5,000 00			5,000 00
For improving French Broad River, between Knoxville, Tenn., and the mouth of Big Creek	June 14, 1880	21	192	1	10,000 00	1881	4,300 00			4,300 00
For improving French Broad River above Knoxville, Tenn.....	Mar. 3, 1881	21	477	1	3,500 00	1882	9,200 00			9,200 00
Total					51,500 00					51,500 00
<i>Little Narragansett Bay—Connecticut and Rhode Island.</i>										
For the improvement of Little Narragansett Bay, Rhode Island and Connecticut.....	Aug. 14, 1876	19	137	1	5,000 00	1878	5,000 00			5,000 00
	June 18, 1878	20	159	1	10,000 00	1879	10,000 00			10,000 00
	Mar. 3, 1879	20	363	1	5,000 00	1880	5,000 00			5,000 00
For continuing improvement	June 14, 1880	21	184	1	5,000 00	1881	5,000 00			5,000 00
	Mar. 3, 1881	21	469	1	5,000 00	1882	5,000 00			5,000 00
Total					30,000 00					30,000 00
<i>Menomonee Harbor—Michigan and Wisconsin.</i>										
For improvement of harbor at mouth of Menomonee River, Wisconsin.....	Mar. 3, 1871	16	538	1	25,000 00	1872	25,000 00			25,000 00
	June 10, 1872	17	370	1	25,000 00	1873	25,000 00			25,000 00
	Mar. 3, 1873	17	560	1	25,000 00	1874	25,000 00			25,000 00
	June 23, 1874	18	237	1	25,000 00	1875	25,000 00			25,000 00
	Mar. 3, 1875	18	456	1	25,000 00	1876	17,000 00			17,000 00
	Aug. 3, 1876	19	133	1	8,000 00	1877	16,000 00			16,000 00
	June 18, 1878	20	155	1	10,000 00	1879	10,000 00			10,000 00
	Mar. 3, 1879	20	368	1	10,000 00	1880	10,000 00			10,000 00
	June 14, 1880	21	183	1	10,000 00	1881	13,000 00			13,000 00
	Mar. 3, 1881	21	472	1	12,000 00	1882	9,000 00			9,000 00
Total					175,000 00					175,000 00
<i>Mississippi River.</i>										
<i>Reservoirs at Headwaters.</i>										
For examinations and surveys for reservoir at sources of the Mississippi, Saint Croix, Chippewa, and Wisconsin Rivers, completing survey	Mar. 3, 1879	20	370	1	25,000 00	1880	25,000 00			25,000 00
For the reservoirs at the headwaters of the Mississippi River to be used in the construction of a dam at Lake Winnibegoshish: <i>Provided</i> , That all injuries occasioned to individuals by overflow of their lands shall be ascertained and determined by agreement, or in accordance with the laws of Minnesota, and shall not exceed in the aggregate \$5,000.	June 14, 1880	21	193	1	75,000 00	1881	1,000 00			

For reservoirs upon the headwaters of the Mississippi River and its tributaries; and this sum, together with the sum of \$75,000 heretofore appropriated for the construction of a dam at Lake Winnibigoshish, shall be expended at such places on said headwaters of the Mississippi River and its tributaries as the Secretary of War shall determine: *And it is provided*, That compensation for any private property taken or appropriated for any of said improvements, and all damages to private property caused by the construction of any of said dams, by flowage or otherwise, shall be ascertained and determined under and in accordance with the laws of the State in which such private property is situated.

Falls of Saint Anthony.

For the preservation of the Falls of Saint Anthony and the navigation of the Mississippi River above the same.

For continuing the same, \$100,000; and \$25,000 of said amount may be expended for the improvement of the Mississippi River above the Falls of Saint Anthony.

For the improvement of the Falls of Saint Anthony, Minnesota.

For the improvement of the Mississippi River above the Falls of Saint Anthony; no part of which shall be expended upon the Falls of Saint Anthony.

For sluice-way through public works at Saint Anthony's Falls, Minnesota: *Provided*, That no part of said sum shall be expended for right of way, and that said improvement can be made without expense to the United States further than the actual construction of said sluiceway.

For repairs and contingencies of public works at Saint Anthony's Falls, to meet repairs necessary, present and prospective.

For repairs and contingencies of public works at Saint Anthony's Falls, to meet repairs necessary, present and prospective, which shall be available immediately after the passage of this act.

For continuing the improvement of the Mississippi River above the Falls of Saint Anthony.

Meeker's Island, Lock and Dam.

For construction of the lock and dam on the Mississippi River, at Meeker's Island, Minnesota, according to the surveys and plans of the War Department: *Provided*, That all rights and claims in and to the land-grant made to the State of Minnesota for the above work, by act approved July 23, 1863, shall be fully relinquished to the United States before any of this appropriation is expended.

Upper Mississippi River.

For improvement of the Upper Mississippi River, removing snags and dredging.

For improvement of the Upper Mississippi River, and removing snags and dredging: *Provided*, That no part of such sum shall be paid for the use of any patent or patented machine in which any engineer or officer employed by the government may be interested.

Mar. 3, 1881	21	481	1	150,000 00	1882	73,248 15 *15,466 90	1882	73,248 15 *15,466 90
July 11, 1870	16	225	1	50,000 00	1871	70,000 00	1871	70,000 00
Mar. 3, 1871	16	540	1	50,000 00	1872	30,000 00	1872	30,000 00
June 16, 1872	17	372	1	50,000 00	1873	80,000 00	1873	80,000 00
Mar. 3, 1873	17	562	1	50,000 00	1874	20,000 00	1874	20,000 00
June 23, 1874	18	239	1	150,000 00	1875	147,000 00	1875	147,000 00
Mar. 3, 1875	18	458	1	100,000 00	1876	100,000 00	1876	100,000 00
Aug. 14, 1876	19	133	1	120,000 00	1877	93,000 00	1877	93,000 00
Aug. 14, 1876	19	136	1	20,000 00	1878	20,000 00	1878	20,000 00
Mar. 3, 1879	20	372	1	10,000 00	1879	10,000 00	1879	10,000 00
June 14, 1880	21	189	1	10,000 00	1880	10,000 00	1880	10,000 00
Mar. 3, 1881	21	479	1	15,000 00	1881	25,000 00	1881	25,000 00
June 14, 1880	21	188	1	15,000 00	1882	25,000 00	1882	25,000 00
Mar. 3, 1881	21	478	1	10,000 00	1882	25,000 00	1882	25,000 00
Mar. 3, 1873	17	562	1	25,000 00	1873	25,000 00	1873	25,000 00
July 11, 1870	16	225	1	36,000 00	1871	31,000 00	1871	31,000 00
Mar. 3, 1871	16	540	1	42,000 00	1872	47,000 00	1872	47,000 00

* Paid by the Interior Department.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
MISSISSIPPI RIVER—Continued. <i>Burlington Harbor.</i> For the improvement of the Rush Chute and the harbor of Burlington, Iowa.....	Aug. 14, 1876	19	136	1	\$10,000 00	1877	\$5,000 00	.....	.....	\$5,000 00
	June 18, 1878	20	154	1	.....	1878	5,000 00	.....	.....	5,000 00
	Mar. 3, 1879	20	367	1	10,000 00	1879	8,000 00	.....	.....	8,000 00
	June 14, 1880	21	183	1	5,000 00	1881	12,000 00	.....	.....	12,000 00
<i>Fort Madison Harbor.</i> For the improvement of the harbor at Fort Madison, Iowa.....	Aug. 14, 1876	19	136	1	10,000 00	1877	5,000 00	.....	.....	5,000 00
	June 18, 1878	20	154	1	8,000 00	1878	5,000 00	.....	.....	5,000 00
	Mar. 3, 1879	20	367	1	3,600 00	1880	3,600 00	.....	.....	3,600 00
	Mar. 3, 1881	21	472	1	2,500 00	1882	2,500 00	.....	.....	2,500 00
<i>Des Moines Rapids.</i> For the improvement of the Rock River Rapids and the Des Moines Rapids, in the Mississippi River, at the lower chain and the English chain.....	Aug. 30, 1852	10	57	.....	100,000 00	1853	2,000 00	.....	.....	2,000 00
	.....	.....	.....	.....	.....	1854	5,737 00	.....	.....	5,737 00
	.....	.....	.....	.....	.....	1855	92,318 91	\$55 91	.....	92,190 11
	Aug. 16, 1856	11	51	.....	200,000 00	1856	41,100 79	72 89	.....	41,100 79
For continuing the improvement of the Des Moines Rapids in the Mississippi River, to be expended under the superintendence of the Secretary of War.....	.....	.....	.....	.....	.....	1859	30,300 00	27 90	.....	30,272 10
	.....	.....	.....	.....	.....	1860	88,027 90	.....	.....	88,027 90
	.....	.....	.....	.....	.....	1861	40,000 00	.....	.....	40,000 00
	June 24, 1866	14	72	.....	200,000 00	1862	258 98	60 10	\$473 22	198 88
For improvement of Des Moines Rapids, Mississippi River. For improving navigation on the Mississippi River at Des Moines or Lower Rapids, according to such plan as the Secretary of War shall, on the report of a board of engineers, approve.....	Mar. 2, 1867	14	420	.....	500,000 00	1867	5,000 00	.....	.....	5,000 00
	.....	.....	.....	.....	.....	1868	111,009 84	5,000 00	.....	106,009 84
	.....	.....	.....	.....	.....	1869	255,000 00	201 00	.....	554,799 00
	Dec. 24, 1869	16	61	.....	200,000 00	1870	534,734 52	630 00	.....	534,104 52
For the purpose of continuing the prosecution of the work upon the improvement of the Des Moines Rapids in the Mississippi River.....	July 11, 1870	16	225	.....	400,000 00	.....	.....	.....	.....	.....
	Jan. 18, 1871	16	399	.....	341,000 00	1871	591,086 64	.....	.....	591,086 61
	Mar. 3, 1871	16	540	.....	250,000 00	1872	400,000 00	.....	.....	400,000 00
	June 10, 1872	17	372	1	400,000 00	1873	400,000 00	.....	.....	400,000 00
For the improvement of the Des Moines Rapids. For the completion of the section work at the Des Moines Rapids.....	Mar. 3, 1873	17	562	1	400,000 00	1874	400,000 00	.....	.....	400,000 00
	June 23, 1874	18	239	1	400,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1875	18	458	1	480,000 00	1875	399,000 00	.....	.....	399,000 00
	Aug. 14, 1876	19	134	1	230,000 00	1876	481,000 00	.....	.....	481,000 00
For the improvement of Des Moines Rapids.....	.....	.....	.....	.....	.....	1877	165,000 00	.....	.....	165,000 00

To pay the current expenses of operating the Des Moines Rapids Canal on the Upper Mississippi River until July 1, 1878.....	Apr. 30, 1878	20	45	.....	7,500 00	1878	72,500 00	.....	.....	72,500 00
	June 18, 1878	20	159	1	95,000 00	1879	85,000 00	33 75	.....	84,966 25
	Mar. 3, 1879	20	367	1	25,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1879	20	367	1	40,000 00	1880	65,033 75	.....	.....	65,033 75

For improving Des Moines Rapids, continuing improvement.....	June 14, 1880	21	188	1	20,000 00	1881	42,000 00	42,000 00
For operating the canal at Des Moines Rapids.....	June 14, 1880	21	188	1	30,000 00	1881	42,000 00	42,000 00
For improving Des Moines Rapids, Iowa and Illinois.....	Mar. 3, 1881	21	478	1	25,000 00	1882	59,000 00	59,000 00
For the purpose of operating and keeping in repair the Des Moines Rapids Canal.....	Mar. 3, 1881	21	478	1	45,000 00	1882	59,000 00	59,000 00
<i>Below the Rapids.</i>								
For the improvement of the navigation of the Mississippi River below the rapids.....	Aug. 30, 1852	10	56	.....	90,000 00	1853	21,000 00	21,000 00
						1854	69,000 00	68,993 66
						1855	5,229 72	5,229 72
						1856	6 34	6 34
						1859	876 19	876 19
<i>Des Moines Rapids to the mouth of the Illinois.</i>								
For improving Mississippi River from Des Moines Rapids to mouth of the Illinois River.....	Mar. 3, 1879	20	367	1	40,000 00	1880	40,000 00	40,000 00
	June 14, 1880	21	188	1	100,000 00	1881	100,000 00	100,000 00
	Mar. 3, 1881	21	478	1	175,000 00	1882	110,000 00	110,000 00
<i>Des Moines Rapids to the mouth of the Ohio.</i>								
For widening and deepening the channel of the Mississippi River from Des Moines Rapids to the mouth of the Ohio River.....	June 18, 1878	20	154	1	100,000 00	1879	75,000 00	75,000 00
						1880	25,000 00	25,000 00
<i>Alexandria.</i>								
For improving the Mississippi River at and above the city of Alexandria, Mo.....	June 14, 1880	21	191	1	10,000 00	1881	10,000 00	10,000 00
	Mar. 3, 1881	21	478	1	6,000 00	1882	6,000 00	6,000 00
<i>Quincy Bay.</i>								
For improving navigation of Mississippi River at Quincy, Ills.....	Mar. 3, 1879	20	372	1	20,000 00	1880	20,000 00	20,000 00
	June 14, 1880	21	188	1	25,000 00	1881	10,000 00	10,000 00
	Mar. 3, 1881	21	478	1	10,000 00	1882	13,000 00	13,000 00
<i>Hannibal.</i>								
For improving Mississippi River at Hannibal, Mo.....	June 14, 1880	21	191	1	25,000 00	1881	25,000 00	25,000 00
	Mar. 3, 1881	21	478	1	20,000 00	1882	20,000 00	20,000 00
<i>Louisiana.</i>								
For improving Mississippi River at Louisiana, Mo.....	Mar. 3, 1881	21	480	1	10,000 00	1882	10,000 00	10,000 00
<i>Between the mouth of the Illinois and the mouth of the Ohio.</i>								
For improvement of Mississippi River, between the mouth of the Missouri River and the mouth of the Meramec River.....	June 10, 1872	17	372	1	100,000 00	1873	106,000 00	106,000 00
For the improvement of the Mississippi River between the mouth of the Illinois River and the mouth of the Missouri River.....	June 10, 1872	17	372	1	25,000 00	1874	219,000 00	219,000 00
For the improvement of the Mississippi River between the mouth of the Missouri River and the mouth of the Ohio River.....	Mar. 3, 1873	17	562	1	200,000 00	1874	106,000 00	106,000 00
For continuing the improvement of the Mississippi River between the mouths of the Ohio and Illinois Rivers; and \$15,000 of said amount shall be expended between the mouths of the Missouri and Illinois Rivers.....	June 23, 1874	18	239	1	200,000 00	1875	219,000 00	219,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
MISSISSIPPI RIVER.—Continued. Between the mouth of the Illinois and the mouth of the Ohio—Continued.	Mar. 3, 1875	18	458	1	\$200,000 00	1875	\$249,000 00			\$249,000 00
						1876	151,000 00			151,000 00
For the improvement of the Mississippi River between the mouths of the Illinois and Ohio Rivers; and \$15,000 of said amount shall be expended between the mouths of the Illinois and Missouri Rivers; and \$15,000 may be expended at Liberty Bar										
For the improvement of the Mississippi River between the mouths of the Illinois and Ohio Rivers; (\$15,000 of which are to be expended between the mouths of the Illinois and Missouri Rivers, and \$30,000 of which are to be expended between the foot of Dickey Island and the mouth of the Ohio River, and \$5,000 of which are to be expended between Islands Number Fourteen and Number Fifteen, near the town of Kaskaskia, Ills.)	Aug. 14, 1876	19	137	1	200,000 00	1877	121,000 00			121,000 00
						1878	79,000 00			79,000 00
For the improvement of the Mississippi River between the mouths of the Ohio and Illinois Rivers; of which \$20,000 shall be expended between the mouths of the Illinois and Missouri, \$75,000 for constructing dam at Cahokia Chute, opposite Saint Louis, \$40,000 between the foot of Dickey's Island and the mouth of the Ohio River, and \$10,000 between Islands Number Fourteen and Fifteen, near the town of Kaskaskia, Ills.	June 18, 1878	20	154	1	240,000 00	1879	240,000 00			240,000 00
For improving the Mississippi River between the mouths of the Illinois and Ohio Rivers; of which \$15,000 shall be expended between the mouths of the Illinois and Missouri Rivers, \$30,000 between the foot of Dickey's Island and the mouth of the Ohio River, and \$8,000 between Islands Number Fourteen and Fifteen, near the town of Kaskaskia, Ills.	Mar. 3, 1879	20	366	1	200,000 00	1880	166,000 00			166,000 00
For improving the Mississippi River between the mouths of the Illinois and Ohio Rivers; \$20,000 of which shall be expended at Kaskaskia Bend, and \$15,000 may be expended on the harbor at Alton	June 14, 1880	21	188	1	250,000 00	1881	251,000 00			251,000 00
For improving the Mississippi River between the mouths of the Illinois and Ohio Rivers, Illinois and Missouri.	Mar. 3, 1881	21	478	1	600,000 00	1882	558,000 00			558,000 00
Saint Louis. For a pier to give direction to the current of the Mississippi River near the city of Saint Louis, Mo.	July 4, 1836	5	130	1	15,000 00					
	Mar. 3, 1837	5	190	1	35,000 00	1837	2,834 12			2,834 12
For the erection of a pier in the Mississippi River near Saint Louis, including the sum of \$15,000 appropriated for that purpose at the last session of Congress						1838	47,165 88			47,165 88
For removing obstructions to the navigation in the harbor of Saint Louis	June 11, 1844	5	661		25,000 00	1845	2,291 00			1,664 70
						1847		\$5 50		
						1851		620 80	\$23,335 30	
For the improvement of the channel of the Mississippi River opposite the city of Saint Louis, Mo., by the construction of a low dam across the channel east of Arsenal Island, known as Cahokia Chute, and in the revetment of said island	Aug. 14, 1876	19	136	1	29,600 00	1877	25,000 00			25,000 00
						1878	4,600 00			4,600 00
For ice harbor at Saint Louis, Mo.: <i>Provided</i> , That no part of this sum shall be expended until a board of engineers shall have been convened and determined upon a plan for the construction of the work	June 14, 1880	21	192	1	50,000 00					

For ice harbor at Saint Louis, Mo	Mar. 3, 1881	21	471	1	10,000 00				
<i>Cape Girardeau.</i>									
For improving the Mississippi River at or near Cape Girardeau and Minton's Point, Missouri.....	June 14, 1880	21	191	1	20,000 00	1881	20,000 00		20,000 00
	Mar. 3, 1881	21	478	1	10,000 00	1882	10,000 00		10,000 00
<i>Cairo to the Passes.</i>									
For the improvement of the Mississippi River, in accordance with the plan therefor recommended in Ex. Dec. No. 58, 2d sess. 46th Cong., by the Mississippi River Commission, to be expended by the Secretary of War, with the advice and under the supervision of said commission.....	Mar. 3, 1881	21	474	-----	1,000,000 00	1881	175,000 00		175,000 00
						1882	825,000 00		825,000 00
<i>Memphis.</i>									
For improving harbor and the Mississippi River at Memphis, Tenn.....	June 18, 1878	20	157	1	46,000 00	1879	46,000 00		46,000 00
	Mar. 3, 1879	20	366	1	37,000 00	1880	25,000 00		25,000 00
	June 14, 1880	21	182	1	15,000 00	1881	27,000 00		27,000 00
	Mar. 3, 1881	21	471	1	15,000 00	1882	15,000 00		15,000 00
<i>Vicksburg.</i>									
For improving Mississippi River at and near Vicksburg, and protection of harbor at Vicksburg, Miss.....	June 18, 1878	20	157	1	84,000 00	1879	60,000 00		60,000 00
	Mar. 3, 1879	20	366	1	50,000 00	1880	74,000 00		74,000 00
	June 14, 1880	21	181	1	20,000 00	1881	20,000 00		20,000 00
	Mar. 3, 1881	21	470	1	75,000 00	1882	55,000 00		55,000 00
<i>Natchez and Vidalia.</i>									
For improving Mississippi River at Natchez and Vidalia, Miss.....	June 14, 1880	21	190	1	40,000 00	1881	40,000 00		40,000 00
	Mar. 3, 1881	21	478	1	50,000 00	1882	45,000 00		45,000 00
<i>New Orleans.</i>									
For improving harbor at New Orleans, La., including cost of surveys and estimates.....	June 18, 1878	20	155	1	50,000 00	1879	35,000 00		35,000 00
	Mar. 3, 1879	20	365	1	60,000 00	1880	17,500 00		17,500 00
	June 14, 1880	21	182	1	75,000 00	1881	17,500 00		17,500 00
	Mar. 3, 1881	21	470	1	75,000 00	1882	50,000 00	10 00	49,990 00
<i>Improving mouth of the river.</i>									
For increasing the depth of water in the mouth of the Mississippi River by closing some of the passages leading out of it, or by cutting a ship channel, or by any other means which shall be deemed expedient by the Secretary of War, with the approbation of the President of the United States; the said sum to be expended in whole or in part, as may be thought proper by the War Department, after the necessary survey shall have been made.....	July 4, 1886	5	130	-----	75,000 00	1886	2,000 00		2,000 00
	Mar. 3, 1887	5	190	-----	210,000 00	1887	117,050 00		117,050 00
						1888	161,000 00		161,000 00
						1889	4,950 00		4,452 03
For continuing the works for the removal of the obstructions to the navigation of the Mississippi River at its mouth.....						1844		497 97	497 97
For opening a ship channel of sufficient capacity to accommodate the wants of commerce through the most convenient pass leading from the Mississippi River into the Gulf of Mexico; and it shall be the duty of the Secretary of War to apply said moneys to the opening of said ship channel by contract, and at an early day in the next session of Congress to report the progress of the work, the amount necessary to complete it, and an estimate of the annual cost of keeping said channel open, and any contract made shall be limited to the amount hereby appropriated.....	Aug. 30, 1882	10	57	-----	75,000 00	1883	1,000 00		1,000 00
						1884	74,000 00		74,000 00

See also "Between the mouth of the Illinois and the mouth of the Ohio." See "Mississippi River Commission." post.

† See "Mississippi River Commission," *post.*

* See also "Between the mouth of the Illinois and the mouth of the Ohio."

proprietor



Statement of appropriations and expenditures for river and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
MISSISSIPPI RIVER—Continued. <i>Improving mouth of the river—Continued.</i>	July 8, 1855	11	24	1	\$330,000 00	1857	\$4,000 00			\$4,000 00
						1858	128,500 00			128,500 00
For opening and keeping open ship channels of sufficient capacity to accommodate the wants of commerce through the South west Pass and Pass à l'Ouvert, leading from the Mississippi River into the Gulf of Mexico						1859	127,055 04			127,055 04
						1860	32,062 02			32,062 02
						1861	38,191 02	\$5,014 10		33,176 92
						1862	4,750 00			1,758 47
						1864		157 47		
						1865		2,834 06	\$3,447 55	
For improving the mouth of the Mississippi River	June 23, 1865	14	72	1	75,000 00					
	Mar. 2, 1867	14	420	1	200,000 00	1867	41,200 00			41,200 00
						1868	215,000 00			215,000 00
						1869	18,350 00			18,350 00
						1870	15,159 71	15,000 00		159 71
	July 11, 1870	16	225	1	300,000 00					
	Mar. 3, 1871	16	540	1	125,000 00	1871	172,490 38	09		172,490 29
						1872	244,800 00	83 00		244,717 00
	June 10, 1872	17	372	1	155,000 00					
	Mar. 3, 1873	17	563	1	125,000 00	1873	203,000 00			203,000 00
To pay the claim of Horace Tyler of New Orleans..... For the improvement of the mouth of the Mississippi River: <i>Provided</i> , That this appropriation shall cease to be available when its necessity is superseded by any work of improvement authorized by law	Apr. 3, 1874	18	26		30,000 00	1874	115,000 00			115,000 00
	June 23, 1874	18	240	1	130,000 00					
	Mar. 3, 1873	17	740		34,988 53	1873	34,988 53			34,988 53
	Mar. 3, 1875	18	458	1	250,000 00	1875	140,083 00	10 00		140,073 00
						1876	233,108 00			233,108 00
	Aug. 14, 1876	19	138	1	100,000 00	1877	91,902 20	20		91,902 00
<i>Gauging the waters.</i> For the annual expense of gauging the waters of the Lower Mississippi and its tributaries, and for continuing observations of the rise and fall of the same, as required by joint resolution of February 21, 1871.....						1878	15,000 00			14,950 00
						1882		50 00		
<i>Survey of the Delta.</i> For the topographical and hydrographical survey of the Delta of the Mississippi, with such investigations as may lead to determine the most practicable plan for securing it from inundation, and the best mode of so deepening the passes at the mouth of the river as to allow ships of twenty feet draught to enter the same	Aug. 14, 1876	19	137	1	5,000 00	1877	5,000 00			5,000 00
	June 18, 1878	20	153	1	5,000 00	1879	5,000 00			5,000 00
	Mar. 3, 1879	20	366	1	5,000 00	1880	5,000 00			5,000 00
	June 14, 1880	21	188	1	5,000 00	1881	4,000 00			4,000 00
	Mar. 3, 1881	21	478	1	5,000 00	1882	6,000 00			6,000 00
For continuing the topographical and hydrographical survey of the Delta of the Mississippi, with such investi-	Sept. 30, 1850	9	539	1	50,000 00	1851	34,788 89			34,788 89
						1852	15,211 11			15,211 11
	Aug. 31, 1852	10	107	1	50,000 00	1853	6,510 00			6,510 00
						1854	1,400 00			1,400 00
						1855	42,090 00			41,029 98
						1858	33,960 50	33,960 50		
						1859	295 24	295 24		

gations as may lead to determine the most practicable plan for securing it from inundation.....

The act of June 23, 1874, provides, "That a board of engineers, to be composed of three from the Army, one from the Coast Survey, and three from civil life, be appointed by the President; which said board shall make a survey of the mouth of the Mississippi River, with a view to determining the best method of obtaining and maintaining a depth of water sufficient for the purposes of commerce, either by a canal from said river to the waters of the Gulf, or by deepening one or more of the natural outlets of said river; and said board shall make a full and detailed estimate and statement of the cost of each of said plans, and shall report the same, together with their opinion thereon, showing which of all said plans they deem preferable, giving their reasons therefor to the Secretary of War, to be presented at the commencement of the 2d session of the 43d Congress.....

Examination and surveys at South Pass,

To ascertain in current and next fiscal years, as required by act of March 3, 1875, the depth of water and width of channel secured and maintained, from time to time, by Jan es B. Eads, at South Pass of Mississippi River, and to enable the Secretary of War to report during the construction of the work the payments made from time to time, and the probable times of other payments, and to report during the construction of the work all important facts relating to the progress of the same, materials used, and the character and permanency with which the said fortifications and auxiliary works are being constructed.

To ascertain the depth of water and width of channel secured and maintained, from time to time, by James B. Eads, at the South Pass of the Mississippi River, and to enable the Secretary of War to report during the construction of the work the payments made from time to time, and the probable times of other payments, and to report during the construction of the work all important facts relating to the progress of the same, materials used, and the character and permanency with which the said jetties and auxiliary works are being constructed, as required by act approved March 3, 1875, and act approved June 19, 1878, which impose on the engineer officer the duty of certifying to the correctness of expenditures for labor, material, and so forth, amounting to \$500,000, to be paid Mr. Eads in monthly installments

Jetties at the South Pass.

The act of March 3, 1875, provides, "That James B. Eads, of Saint Louis, Missouri, be, and he is hereby, authorized, with such others as may be associated with him, on the conditions hereinafter mentioned, to construct such permanent and sufficient jetties and such auxiliary works as are necessary to create and permanently maintain, as hereinafter set forth, a wide and deep channel between the South Pass of the Mississippi River and the Gulf of Mexico, and for that purpose he may construct, in the river, outlet, or pass, and likewise in the Gulf of Mexico, such walls, jetties, dikes, levees, and other structures, and employ such boats, rafts, and appliances, as he may, in the prosecution of said work, deem necessary: *Provided*, That no such structures or means employed shall hinder, delay, or materially interfere with the free navigation of

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

channel 2½ feet in depth, and not less than 300 feet in width shall be obtained, there shall be paid \$500,000; and when a channel of said depth and width shall have been maintained for twelve months consecutively, \$250,000 shall be paid with interest at 5 per cent. per annum from the date when said channel was first obtained. When a channel 28 feet in depth and not less than 350 feet in width shall be obtained, there shall be paid \$500,000; and after said depth and width shall have been maintained for twelve months consecutively, \$250,000 shall be paid with interest at 6 per cent. per annum from the date when said 28 feet were first obtained. When a channel 30 feet in depth and not less than 350 feet in width shall be obtained, there shall be paid \$500,000; and after such depth and width shall have been maintained for twelve months consecutively, there shall be paid \$500,000 with interest at 5 per cent. per annum from the date when a channel of said depth and width was first obtained; making a total aggregate of \$4,250,000 for the aforesaid payments, the respective depths and widths of channel being measured at average flood-tide, as ascertained and determined by the Secretary of War. When a channel 30 feet in depth and 350 feet in width shall have been obtained by the effect of said jetties and auxiliary works aforesaid, the remaining \$1,000,000 shall be deemed as having been earned by said Eads and associates; but said amount shall remain as security in the possession of the United States for the purposes hereinafter set forth, interest at 5 per cent. per annum on the same being payable to said Eads, his assigns and legal representatives, semi-annually, from the date when a channel of 30 feet in depth and 350 feet in width shall have been first secured, so long as said money, or any part thereof, is held by the United States. That after said channel of 30 feet in depth and of not less than 350 feet in width shall have been secured, \$100,000 per annum shall be paid in equal quarterly payments during each and every year that said channel of 30 feet in depth and 350 feet in width shall have been maintained by said Eads and his associates by the effect of said jetties and auxiliary works aforesaid in said pass, for a period of twenty years, dating from the date on which said channel of 30 feet in depth and 350 feet in width shall be first secured: *Provided, however,* That no part of such annual compensation shall be paid for any period of time during which the channel of said pass shall be less than 30 feet in depth and 350 feet in width, as hereinbefore specified. That the said channel of 30 feet in depth and 350 feet in width having been maintained for ten years, one-half of the \$1,000,000 hereinbefore mentioned shall be released and paid to said Eads, his assigns or legal representatives; and said depth and width having been maintained for ten additional years, the remaining half of the said \$1,000,000 shall be released and paid as aforesaid. And if any of said money shall have been paid under the provisions of this act as hereinafter provided, then the residue shall be paid at the times above stated. That in case said Eads and associates in order to maintain a channel of 30 feet in depth and 350 feet in width, shall deem it necessary to expend on said work, during any one or more of said twenty years, any money in excess of the annual payments received by them during said year or years under this act, the Secretary of War shall, on satisfactory proof of such expenditures, authorize, as often as such extra expenditures may require, the payment of the same from the said money in pledge, to said Eads or his legal representatives. And such payments shall be made from the \$500,000 to be released at the end of ten years before any payment shall be made from the \$500,000 to be released at the end of twenty years; and if any failure to maintain said channel

[illegible]

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

drawn. All other payments to said James B. Eads, his lawful assigns or legal representatives, are to be made under and in pursuance of the provisions of the hereinbefore-recited act; the whole of said act, except as the same is hereby expressly modified or amended, to have the same force and effect as if this act had not been passed.

SEC. 4. The President of the United States is hereby authorized and directed to convene a board of five engineers of the Army, which said board shall visit the works in process of construction by said James B. Eads at the South Pass of the Mississippi River, and make an examination of the same, and make a full report of the progress made in the construction of the works, the probable cost of their completion, and the results produced, or that may properly be produced by them, their probable permanency, and of the advisability of any modification of the terms of the act under which said Eads is constructing said works, so far as regards dimensions of channel through the jetties, and of the terms of payment for the same; which said report shall be submitted to the Secretary of War, to be presented at the next session of Congress."

The act of June 20, 1878, provides that, "The requisite amount is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to pay all money that may become due and owing to James B. Eads and his associates, or that may become payable to said Eads, his assigns or legal representatives, in accordance with the provisions of the act approved March 3, 1875, and the act amendatory thereof, prior to February 1, 1879."

The act of March 3, 1879, provides, "That the fourth and succeeding sections of an act entitled 'An act making appropriations for the repair, preservation, and completion of certain public works on rivers and harbors, and for other purposes,' approved March 3, 1875, authorizing James B. Eads and his associates to create and permanently maintain a wide and deep channel between the South Pass of the Mississippi River and the Gulf of Mexico be, and they are hereby, amended so as to provide in lieu of the payments therein provided, that payment of said Eads or his legal representatives shall be made as follows, namely: The Secretary of War is hereby authorized and directed to draw his warrant upon the Secretary of the Treasury of the United States in favor of said James B. Eads or his legal representatives for the sum of \$750,000, which said sum is hereby appropriated; and the Secretary of the Treasury is hereby authorized and directed to pay to said Eads or his legal representatives, out of any money in the Treasury not otherwise appropriated, the sum for which said warrant is drawn. When a channel shall have been obtained by the action of the jetties and auxiliary works authorized by said act 25 feet in depth and not less than 200 feet in width at the bottom, through the said jetties, there shall be paid \$500,000. When a channel shall have been obtained through the jetties 26 feet in depth, and not less than 200 feet in width at the bottom, there shall be paid \$500,000. When a channel 30 feet in depth, without regard to width, shall have been obtained through the jetties, there shall be paid \$500,000; and the \$1,000,000 provided by the hereinbefore-recited act to be paid by the United States in ten and twenty years shall be earned by said Eads and his associates, and the same, with interest, shall be paid to said Eads, or his legal representatives, at the times and in the manner provided by said act. The \$100,000 per annum provided by said recited act to be paid to said Eads and his associates during a period of twenty years shall be paid at the times and in the manner therein provided, upon the maintenance by said Eads and his associates of a channel through the jetties 26 feet in depth,

June 19, 1878 20 168-9 1-4

June 20, 1878 20 223-4 1

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Volume.	Reference to the Stats. at Large.		Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
			Page.	Section.						
<p>Mississippi River—Continued.</p> <p><i>Jetties at the South Pass</i>—Continued.</p> <p>not less than 200 feet in width at the bottom, and having through it a central depth of 30 feet without regard to width. Nothing herein contained shall be so construed as to repeal or in anywise affect the provisions of the amendatory act approved June 19, 1878, by which said Eads is entitled to receive certain moneys to pay for materials furnished, labor done, and expenditures incurred in the construction of the work at the mouth of the Mississippi River; and the whole of the hereinbefore-recited act, approved March 3, 1875, except as the same is hereby expressly modified or amended, or has by act heretofore passed been modified or amended, shall be and remain in full force, and have the same effect as if this act had not been passed”</p> <p>The act of May 13, 1879, provides, “That the requisite amount is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to enable the Secretary of War to cause to be paid all money that may become due and owing to James B. Eads and his associates, or that may become payable to said Eads, his assigns or legal representatives, in accordance with the provisions of the act approved March 3, 1875, and the acts amendatory thereof, and to continue the monthly payments in the manner and to the full extent of the amount specified in the act approved June 19, 1878, chapter 313, Statutes at Large: <i>Provided</i>, That nothing herein contained shall be held or construed as waiving or impairing any right which the United States may have under the original act hereinbefore referred to or the several acts amendatory thereof: <i>And provided further</i>, That nothing in this act shall be construed as making an appropriation for the payment of the \$1,000,000 which, by the provisions of the act of March 3, 1875, are to remain as security in the possession of the United States and only to become payable, one-half at the end of ten years and the residue at the end of twenty years after the completion of the work provided for in said acts, as ascertained and determined by the Secretary of War.”</p>	Mar. 3, 1879	20	376	9						
	May 13, 1879	21	4		\$1,750,000 00	1879	\$1,750,000 00			\$1,750,000 00
					1,100,000 00	1880	1,100,000 00			1,100,000 00
					125,000 00	1881	125,000 00			125,000 00
					175,000 00	1882	175,000 00			175,000 00

Mississippi River Commission.

The act of June 28, 1879, provides, “That a commission is hereby created, to be called ‘The Mississippi River Commission,’ to consist of seven members. SEC. 2. The President of the United States shall, by and with the advice and consent of the Senate, appoint seven commissioners, three of whom shall be selected from the Engineer Corps of the Army, one from the Coast and Geodetic Survey, and three from civil life, two of whom shall be civil engineers. And any vacancy which may occur in the commission shall in like manner be filled by the President of the United States; and he shall designate one of the commissioners appointed from the Engineer Corps of the

Army to be president of the commission. The commissioners appointed from the Engineer Corps of the Army and the Coast and Geodetic Survey shall receive no other pay or compensation than is now allowed them by law, and the other three commissioners shall receive as pay and compensation for their services each the sum of \$3,000 per annum; and the commissioners appointed under this act shall remain in office subject to removal by the President of the United States. SEC. 3. It shall be the duty of said commission to direct and complete such surveys of said river, between the Head of the Passes, near its mouth, to its headwaters, as may now be in progress, and to make such additional surveys, examinations, and investigations, topographical, hydrographical, and hydro-metrical, of said river and its tributaries, as may be deemed necessary by said commission to carry out the objects of this act. And to enable said commission to complete such surveys, examinations, and investigations, the Secretary of War shall, when requested by said commission, detail from the Engineer Corps of the Army such officers and men as may be necessary, and shall place in the charge and for the use of said commission such vessel or vessels and such machinery and instruments as may be deemed necessary. And the said commission may, with the approval of the Secretary of War, employ such additional force and assistants, and provide, by purchase or otherwise, such vessels or boats and such instruments and means as may be deemed necessary. SEC. 4. It shall be the duty of said commission to take into consideration and mature such plan or plans and estimates as will correct, permanently locate, and deepen the channel and protect the banks of the Mississippi River; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade, and postal service; and when so prepared and matured, to submit to the Secretary of War a full and detailed report of their proceedings and actions, and of such plans, with estimates of the cost thereof, for the purposes aforesaid, to be by him transmitted to Congress: *Provided*, That the commission shall report in full upon the practicability, feasibility, and probable cost of the various plans known as the jetty system, the levee system, and the outlet system, as well as upon such others as they deem necessary. SEC. 5. The said commission may, prior to the completion of all the surveys and examinations contemplated by this act, prepare and submit to the Secretary of War, plans, specifications, and estimates of costs for such immediate works as, in the judgment of said commission, may constitute a part of the general system of works herein contemplated, to be by him transmitted to Congress. SEC. 6. The Secretary of War may detail from the Engineer Corps of the Army of the United States an officer to act as secretary of said commission. SEC. 7. The Secretary of War is hereby authorized to expend the sum of \$175,000, or so much thereof as may be necessary, for the payment of the salaries herein provided for, and of the necessary expenses incurred in the completion of such surveys as may now be in progress, and of such additional surveys, examinations, and investigations as may be deemed necessary, reporting the plans and estimates, and the plans, specifications, and estimates contemplated by this act, as herein provided for; and said sum is hereby appropriated for said purposes.

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
MISSISSIPPI RIVER.—Continued. <i>Mississippi River Commission.—Continued.</i> For surveys and examinations and the necessary salaries and other expenses of the Mississippi River Commission. For salaries and traveling expenses of commission, office expenses, and reduction of work; for continuation of surveys and gaugings of Mississippi River and its tributaries; for permanent gauge-stations and borings; for publication of maps and results.	June 16, 1880	21	271	.....	\$150,000 00	1881	\$163,015 00	\$15 00	.....	\$163,000 00
	Mar. 3, 1881	21	447	.....	150,000 00	1882	135,000 00	.....	.....	135,000 00
<p>NOTE.—The act of March 3, 1881 (21 Statutes, 474), provides that "It shall be the duty of said commission to take into consideration, and of the Secretary of War to extend operations, under their supervision, to tributaries of the Mississippi River to the extent, and no further, that may be necessary, in the judgment of said commission, to the perfection of the general and permanent improvement of said Mississippi River; but this clause shall not be construed to interfere with the prosecution by the War Department of the improvement of said Mississippi River and its tributaries under general appropriations made therefor: <i>Provided</i>, That no portion of the sum hereby appropriated shall be used in the repair or construction of levees for the purpose of preventing injury to lands by overflow, or for any other purpose whatever except as a means of deepening or improving the channel of said river. And it shall be the duty of said commission to make report, on or before the first day of January next, to the Secretary of War, for transmittal by him to Congress, of a detailed statement of the work done, and of the expenditure made from the sum hereby appropriated, with their judgment upon the effect of such work, and the general practicability and estimate of the total cost of such improvements along said river from Cairo to the head of the passes."</p>										
Total	.....	.....	.....	.....	20,194,188 53	.....	19,668,035 03	131,039 31	28,214 60	19,536,995 72
Balance	.....	.....	.....	.....	.....	.....	.....	.....	628,948 21	.....
<p>NOTE.—This balance of \$628,948.21 is made up of balances of the following appropriations:</p>										
Reservoirs at headwaters.....	\$135,584 95									
Falls of Saint Anthony.....	1,000 00									
Meek's Island, West and dam.....	25,000 00									
Saint Paul to Des Moines.....	20,000 00									
Duquette Harbor.....	3,000 00									
Rock Island Rapids.....	3,000 00									
Rock Island Harbor.....	3,000 00									
Des Moines Rapids.....	24,000 00									
Des Moines Rapids to the mouth of the Illinois.....	63,000 00									
Quincy Bay.....	12,000 00									
Between the mouth of the Illinois and the mouth of the Ohio.....	73,000 00									
Saint Louis.....	60,000 00									
Nicksburg.....	20,000 00									
Natchez and Vidalia.....	3,000 00									
New Orleans.....	140,010 00									
Improving mouth of the river.....	50 00									
Examination and surveys of South Pass.....	3,603 26									
Mississippi River Commission.....	13,000 00									
Total	628,948 21									
Mississippi and Missouri Rivers. For the improvement of the Mississippi River above the mouth of the Ohio River, and for the Missouri River, to be expended in such manner, and for the removal of such obstructions, as the Secretary of War shall direct	July 2, 1836	5	68	.....	40,000 00	1836	8,000 00	.....	.....	8,000 00

For continuing the improvement of the Mississippi River above the mouth of the Ohio, and of the Missouri River ...	Mar. 3, 1837	5	190	1	40,000 00	1837	15,000 00				15,000 00
	July 7, 1838	5	270	1	20,000 00	1838	55,000 00				55,000 00
						1839	22,000 00				20,541 30
						1842		1,302 85			
						1844		155 85			
					1845				\$1,458 70		
Total					100,000 00		100,000 00	1,458 70	1,458 70		98,541 30
<i>Mississippi and Ohio Rivers.</i>											
The act of May 24, 1824, provides, "That for the purpose of improving the navigation of the Mississippi River from the mouth of the Missouri to New Orleans, and of the Ohio River from Pittsburgh to its junction with the Mississippi, the President of the United States is hereby authorized to take prompt and effectual measures for the removal of all trees which may be fixed in the bed of said river; and, for this purpose, he is authorized to procure and provide, in that way which in his discretion may be most eligible, the requisite water-craft, machinery, implements, and force, to raise all such trees, commonly called 'planters, sawyers, or snags,' as may be found in the current of the said rivers at the lowest stage of water, and to saw or cut them off, as near as practicable, to the bottom of the stream; and where trees are found upon sand-bars, upon the points of islands, or near the bank of the river, which may, at the lowest stage of the water, endanger the safety of navigating said rivers, they shall in like manner be cut, removed, or sawed off; and all roots or limbs belonging to those parts of said trees, which are fastened in the earth, shall be carefully cut away"											
For improving the navigation of the Ohio and Mississippi Rivers	May 24, 1824	4	33	2	75,000 00	1824	2,842 00				2,842 00
						1825	11,244 23				11,244 23
						1826	16,002 18		44,911 59		16,002 18
Total											
<i>For the improvement of the navigation of the Ohio and Mississippi Rivers from Pittsburgh to New Orleans, in removing the obstructions in the channels at the shoal places and ripples, and by such other means as may be deemed best for the deepening of the channels of the Ohio River; which said sum shall be expended under the direction of the President of the United States by the superintendent appointed to execute said works of improvement; and the President is hereby authorized and required to take bond, with approved security, in \$50,000, conditioned for the faithful performance of the duties required of him under such instructions as may be given him for the improvement of the navigation of said rivers; and that an officer of engineers be associated with said superintendent, with authority to suspend the operation of any work, or payment of any account, until the order of the President is received</i>											
	Mar. 2, 1827	4	216	2	44,911 59	1827	26,716 00				26,716 00
	May 23, 1828	4	289		50,000 00	1828	46,930 31				46,930 31
	Mar. 3, 1829	4	363	1	50,000 00	1829	48,000 00	799 40			47,200 60
	Apr. 23, 1830	4	395		50,000 00	1830	59,027 00	3 35			59,023 65
	Mar. 2, 1831	4	462		50,000 00						
	Mar. 2, 1831	4	462		150,000 00	1831	156,837 00				156,867 00
						1832	47,874 03				47,874 03
						1833	10,300 00				10,300 00
	July 2, 1836	5	69		17,800 05						
	July 2, 1836	5	68		60,000 00	1836	77,790 05				77,790 05
	Mar. 3, 1837	5	190		60,000 00	1837	77,510 05				60,010 00
	July 7, 1838	5	270	1	70,000 00	1838	35,000 00	17,500 05			24,120 00
						1839	34,560 63	10,880 00			34,560 63
						1840	11,319 37				10,019 37
Total								1,300 00	1,300 00		
<i>For the improvement of the navigation of the Ohio and Mississippi Rivers from Louisville to New Orleans</i>											
Total					677,711 64		661,982 85	30,482 80	46,211 59		631,500 05
<i>Mississippi, Missouri, and Ohio Rivers.</i>											
For improving the navigation of the Ohio, Missouri, and Mississippi Rivers	July 3, 1832	4	552	1	50,000 00	1832	39,100 00				39,100 00
	Mar. 2, 1833	4	648	1	50,000 00	1833	60,900 00				60,900 00
	June 28, 1834	4	703		50,000 00	1834	52,880 40	2,880 40			50,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Mississippi, Missouri, and Ohio Rivers—Continued.</i>										
For improving the navigation of the Ohio River below the falls, and the Missouri and Mississippi Rivers.	Mar. 3, 1835	4	754	.....	\$50,000 00	1835	\$50,000 00	.....	.....	\$32,199 95
For improving the navigation of the Ohio, Missouri, and Mississippi Rivers, and to replace the steam snag-boat Archimedes, sunk in the Mississippi River in November last.	Mar. 3, 1837	5	190	1	23,000 00	1836	19,723 79	\$17,800 05	.....	19,723 79
						1837	21,000 00	.....	.....	21,000 00
						1838	.....	.....	\$76 26	.....
						1839	.....	.....	.....	.....
Total.					223,000 00	.....	243,604 19	20,680 45	76 26	222,923 74
<i>Mississippi, Missouri, Ohio, and Arkansas Rivers.</i>										
For building and repairing the necessary boats, and for carrying on the improvements on the Mississippi, Missouri, Ohio, and Arkansas Rivers.	Aug. 23, 1842	5	510	3	100,000 00	1842	16,000 00	.....	.....	16,000 00
For the continuation of improvements on the Mississippi, Missouri, Ohio, and Arkansas Rivers for the half year, \$50,000, and for the fiscal year, \$100,000.	Mar. 1, 1843	5	606	1	50,000 00	1843	65,742 00	.....	.....	65,742 00
	Mar. 1, 1843	5	606	1	100,000 00	.....	.....	.....	.....	.....
	June 11, 1844	5	661	.....	180,000 00	1844	178,450 29	.....	.....	178,450 29
						1845	146,230 00	18,426 33	.....	127,803 67
						1846	51,527 13	9,523 09	.....	41,941 31
						1850	.....	30 10	.....	.....
For the improvement of the Ohio River below the falls at Louisville, and of the Mississippi, Missouri, and Arkansas Rivers	.....	.....	.....	.....	.....	1852	1,481 39	1,481 39	30 10	.....
						1856	.....	4 73	.....	.....
						1858	.....	27 90	27 90	.....
For improvement of the Mississippi, Missouri, Ohio, and Arkansas Rivers	June 23, 1866	14	72	1	550,000 00	1867	66,500 00	.....	.....	66,500 00
						1868	202,419 25	.....	.....	202,419 25
						1869	162,300 00	.....	.....	162,300 00
						1870	41,673 65	.....	.....	41,673 65
For improvement of the Mississippi, Missouri, and Arkansas Rivers	July 11, 1870	16	225	1	150,000 00	1871	190,636 70	1,680 06	.....	188,956 64
	Mar. 3, 1871	16	540	1	150,000 00	1872	141,375 00	1,375 00	.....	140,000 00
	June 10, 1872	17	372	1	90,000 00	.....	.....	.....	.....	.....
	Mar. 3, 1873	17	562	1	100,000 00	1873	117,162 46	.....	.....	117,162 46
	June 23, 1874	18	289	1	100,000 00	1874	120,988 00	.....	.....	120,988 00
	Mar. 3, 1875	18	458	1	100,000 00	1875	114,300 00	.....	.....	114,300 00
						1876	85,000 00	.....	.....	85,000 00
For the removal of snags and other obstructions from the Mississippi, Missouri, and Arkansas Rivers; <i>Provided</i> , That \$10,000 thereof shall be expended for removing the bar at Fort Smith, Arkansas, and that \$40,000 shall be expended on the Missouri River, including improvements opposite Saint Joseph, Mo., and at Nebraska City.	Aug. 14, 1876	19	137	1	100,000 00	1877	70,500 00	.....	.....	70,500 00
For the removal of snags and other obstructions from the Mississippi, Missouri, and Arkansas Rivers, and for the preservation of the government vessels in that service.	Feb. 7, 1878	20	24	1	40,000 00	1878	70,200 00	.....	.....	70,200 00
For continuing operations, removing snags and other obstructions; of which \$10,000 shall be used for removing the bar in the Arkansas River at Fort Smith.	June 18, 1878	20	153	1	180,000 00	1879	180,000 00	.....	.....	180,000 00
For removing snags, sand bars, wrecks, and other obstructions, and correcting and deepening the channel; of which \$100,000 shall be expended on the Mississippi River, \$60,000 on the Missouri River, and \$30,000 on the Arkansas River.	Mar. 3, 1879	20	365	1	190,000 00	1880	190,000 00	.....	.....	190,000 00

	June 14, 1880	187	1	200,000 00	1881	200,000 00			
For removing snags, wrecks, and other obstructions; of which \$100,000 shall be expended on the Mississippi River, \$65,000 on the Missouri, and \$35,000 on the Arkansas	June 14, 1880	21	187	1	200,000 00	1881	200,000 00		
For improving the Mississippi, Missouri, and Arkansas Rivers—removing snags, wrecks, and other obstructions; of which \$90,000 shall be expended on the Mississippi River, \$80,000 on the Missouri River, and \$25,000 on the Arkansas River; and the work herein provided for shall be prosecuted at all seasons of the year, and especially between the first day of July and the first day of November of each year: <i>Provided</i> , That so much of said \$90,000 hereby appropriated to the Missouri River as may be necessary shall be expended in the construction of a snag and dredge boat, to be used in said river, the balance to be expended in operating said boat	Mar. 3, 1881	21	473	1	185,000 00	1882	105,000 00		
Total					2,565,000 00		2,517,485 87	32,548 60	62 73
Balance								80,000 00	
MISSOURI RIVER—Dakota, Iowa, Kansas, Missouri, Montana, and Nebraska.									
For the improvement of the navigation of the Missouri River	Aug. 30, 1882	10	56		40,000 00	1883	6,000 00		
						1884	30,734 00		
						1885	4,919 75	1,653 75	
						1886	65 63	65 63	
						1889	1,204 94	1,204 94	
For the survey of the Missouri River from its mouth to Sioux City, and estimates for the improvement and maintenance of its navigation	June 18, 1878	20	153	1	50,000 00	1879	50,000 00		
For survey of Missouri River from its mouth to Fort Benton, Mont.	Mar. 3, 1879	20	366	1	30,000 00	1880	30,000 00		
For survey of Missouri River from its mouth to Sioux City, Iowa, of which sum \$5,000 may be used, in the discretion of the Secretary of War, in protecting the work done on said river at or near Sioux City	June 14, 1880	21	191	1	30,000 00	1881	26,000 00		
For survey of Missouri River from its mouth to Fort Benton, Mont.: Continuing survey above Sioux City	Mar. 3, 1881	21	479	1	30,000 00	1882	34,000 00		
For the improvement of the Missouri River: Removal of snags, wrecks, &c.	June 18, 1878	20	153	1	70,000 00	1879	70,000 00		
	Aug. 14, 1878	19	136	1	20,000 00	1877	20,000 00		
	June 18, 1878	20	154	1	30,000 00	1879	30,000 00		
	Mar. 3, 1879	20	366	1	45,000 00	1880	33,000 00		
	June 14, 1880	21	189	1	25,000 00	1881	33,800 00		
	Mar. 3, 1881	21	479	1	40,000 00	1882	43,200 00		
Vermillion.									
For improvement of Missouri River at Vermillion, Dak.	Mar. 3, 1879	20	372	1	5,000 00	1879	2,500 00		
	June 14, 1880	21	188	1	10,000 00	1880	2,500 00		
	Mar. 3, 1881	21	479	1	15,000 00	1882	10,000 00		
							15,000 00		
Sioux City.									
For improving the Missouri River at Sioux City, Iowa.	June 18, 1878	20	158	1	12,500 00				
For improving the Missouri River at Sioux City; which sum shall be available on the passage of this act	Mar. 3, 1879	20	366	1	10,000 00	1879	17,500 00		
For improving Missouri River at Sioux City: Continuing operations.						1880	5,000 00		
For improving Missouri River at Sioux City: For improvement of channel.	June 14, 1880	21	188	1	8,000 00				
	Mar. 3, 1881	21	479	1	7,000 00	1881	9,000 00		
						1882	6,000 00		
Council Bluffs and Omaha.									
For the improvement of the Missouri River at Council Bluffs, Iowa, and Omaha, Nebr.	June 18, 1878	20	154	1	50,000 00				
For improving the Missouri River at Omaha City, Nebr.	June 18, 1878	20	158	1	30,000 00	1879	30,000 00		

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
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Missouri River—Continued. <i>Council Bluffs and Omaha—Continued.</i> For improving the Missouri River at Council Bluffs, Iowa, and at Omaha, Nebr.....	Mar. 3, 1879	20	366	1	\$50,000 00	1879	\$65,000 00			\$65,000 00
	June 14, 1880	21	188	1	20,000 00	1880	35,000 00			35,000 00
	Mar. 3, 1881	21	479	1	30,000 00	1881	22,000 00			22,000 00
						1882	27,000 00			27,000 00
Plattsmouth. For improving Missouri River at Plattsmouth, Nebr.....	June 14, 1880	21	188	1	10,000 00	1881	8,600 00			8,600 00
	Mar. 3, 1881	21	479	1	10,000 00	1882	11,400 00			11,400 00
Eastport and Nebraska City. For improving the Missouri River at Nebraska City, Nebr.. For the improvement of the Missouri River at Eastport, Iowa, and Nebraska City, Nebr.....	June 18, 1878	20	154	1	20,000 00	1879	20,000 00			20,000 00
	June 18, 1878	20	18	1	20,000 00	1879	26,000 00			26,000 00
	Mar. 3, 1879	20	366	1	30,000 00	1880	24,000 00			24,000 00
	June 14, 1880	21	188	1	14,000 00	1881	18,000 00			18,000 00
	Mar. 3, 1881	21	479	1	20,000 00	1882	16,000 00			16,000 00
Brownville. For improving Missouri River at Brownville, Nebr.....	June 14, 1880	21	188	1	10,000 00	1881	14,000 00			14,000 00
	Mar. 3, 1881	21	478	1	10,000 00	1882	6,000 00			6,000 00
Saint Joseph. For improving the Missouri River opposite or near Saint Joseph, Mo.....	June 18, 1878	20	154	1	50,000 00	1879	55,000 00			55,000 00
	Mar. 3, 1879	20	366	1	9,000 00	1880	4,000 00			4,000 00
	June 14, 1880	21	188	1	20,000 00	1881	20,000 00			20,000 00
	Mar. 3, 1881	21	479	1	20,000 00	1882	20,000 00			20,000 00
Atchison. For the improvement of the Missouri River at Atchison, Kans.....	June 18, 1878	20	158	1	20,000 00	1879	28,000 00			28,000 00
	Mar. 3, 1879	20	366	1	20,000 00	1880	12,000 00			12,000 00
	June 14, 1880	21	188	1	20,000 00	1881	24,000 00			24,000 00
	Mar. 3, 1881	21	478	1	20,000 00	1882	16,000 00			16,000 00
Fort Leavenworth. For the improvement of the Missouri River at Fort Leavenworth, Kans.....	June 18, 1878	20	158	1	25,000 00	1879	28,000 00			28,000 00
	Mar. 3, 1879	20	366	1	10,000 00	1880	7,000 00			7,000 00
	June 14, 1880	21	188	1	8,000 00	1881	10,000 00			10,000 00
	Mar. 3, 1881	21	479	1	8,000 00	1882	6,000 00			6,000 00

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

Osage River—Missouri and Kansas.

For the improvement of the Osage River, Missouri	Mar. 3, 1871	16	541	1	25,000 00	1871	5,000 00	.....	.....	.....	5,000 00
	June 10, 1872	17	372	1	25,000 00	1872	10,000 00	.....	.....	.....	10,000 00
	Mar. 3, 1873	17	562	1	25,000 00	1873	20,000 00	.....	.....	.....	20,000 00
	June 23, 1874	18	239	1	25,000 00	1874	40,000 00	.....	5 61	.....	39,994 39
	June 23, 1874	18	239	1	25,000 00	1875	25,000 00	.....	.....	.....	25,000 00
For the improvement of the Osage River, Missouri and Kansas	June 18, 1878	20	158	1	20,000 00	1877	.....	.....	5 61	.....	20,000 00
	Mar. 3, 1879	20	372	1	20,000 00	1879	20,000 00	.....	.....	.....	20,000 00
	June 14, 1880	21	188	1	30,000 00	1880	20,000 00	.....	.....	.....	20,000 00
	Mar. 3, 1881	21	478	1	20,000 00	1881	20,000 00	.....	.....	.....	20,000 00
	Mar. 3, 1881	21	478	1	20,000 00	1882	20,000 00	.....	.....	.....	20,000 00
Total					190,000 00		180,000 00	.....	5 61	.....	179,994 39
Balance								.....	10,000 00	.....

Ouachita River—Arkansas and Louisiana.

For improvement of Ouachita River from Louisiana State line to the town of Arkadelphia, in the State of Arkansas, on said river.

For improvement of Ouachita River from Louisiana State line to the town of Arkadelphia, in the State of Arkansas, on said river.	Mar. 3, 1871	16	538	1	25,000 00	1871	10,000 00	.....	.....	.....	10,000 00
	Mar. 3, 1871	16	540	1	26,000 00	1872	41,000 00	.....	.....	.....	41,000 00
	June 10, 1872	17	372	1	60,000 00	.....	.....	.....	.....	.....	.....
	June 16, 1872	17	372	1	40,000 00	1873	44,000 00	.....	.....	.....	44,000 00
	Mar. 3, 1873	17	562	1	60,000 00	1874	46,000 00	.....	.....	.....	46,000 00
For improvement of Ouachita River from Arkansas State line to mouth of said river	June 14, 1876	19	135	1	12,000 00	1875	38,000 00	.....	.....	.....	38,000 00
	June 18, 1878	20	153	1	10,000 00	1876	12,000 00	.....	.....	.....	12,000 00
	Mar. 3, 1879	20	366	1	10,000 00	1877	8,800 00	.....	.....	.....	8,800 00
	June 14, 1880	21	187	1	8,000 00	1878	3,200 00	.....	.....	.....	3,200 00
	Mar. 3, 1881	21	477	1	12,000 00	1879	10,000 00	.....	.....	.....	10,000 00
Total					263,000 00	1880	5,000 00	.....	.....	.....	5,000 00
Balance						1881	18,000 00	.....	.....	.....	18,000 00
						1882	6,000 00	.....	.....	.....	6,000 00
							262,000 00	.....	.....	.....	262,000 00
								.....	1,000 00	.....

Pawcatuck River—Rhode Island and Connecticut.

For the improvement of Pawcatuck River, Rhode Island and Connecticut	Mar. 3, 1871	16	540	1	10,000 00	1871	1,000 00	.....	.....	.....	1,000 00
	June 10, 1872	17	374	1	10,000 00	1872	9,000 00	.....	.....	.....	9,000 00
	Mar. 3, 1873	17	564	1	10,000 00	1873	16,000 00	.....	.....	.....	16,000 00
	June 23, 1874	18	241	1	10,000 00	1874	10,000 00	.....	.....	.....	10,000 00
	Mar. 3, 1875	18	460	1	10,000 00	1875	10,000 00	.....	.....	.....	10,000 00
Total					50,000 00	1876	10,000 00	.....	.....	.....	10,000 00
Balance							50,000 00	.....	.....	.....	50,000 00

Red River of the North—Minnesota and Dakota.

For the improvement of the Red River of the North, Minnesota	Aug. 14, 1876	19	137	1	10,000 00	1877	5,000 00	.....	.....	.....	5,000 00
	June 18, 1878	20	154	1	30,000 00	1878	5,000 00	.....	.....	.....	5,000 00
	Mar. 3, 1879	20	367	1	25,000 00	1879	15,000 00	.....	.....	.....	15,000 00
	June 18, 1880	21	189	1	20,000 00	1880	25,000 00	.....	.....	.....	25,000 00
	Mar. 3, 1881	21	479	1	18,000 00	1881	15,000 00	.....	.....	.....	15,000 00
For improving Red River of the North, Minnesota and Dakota, exclusively for dredging	Mar. 3, 1881	21	479	1	18,000 00	1882	18,000 00	.....	.....	.....	18,000 00
	For improving Red River of the North							.....	.....	.....
	For constructing a lock and dam at Goose Rapids, on the Red River of the North							.....	.....	.....
								
								
Total					123,000 00		83,000 00	.....	.....	.....	83,000 00
Balance								.....	40,000 00	.....

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Red River of the South—Arkansas, Louisiana, and Texas.</i>										
For improving the navigation of Red River, through or around that part of it called the Raft, situated in Louisiana and Arkansas	May 23, 1828	4	289		\$25,000 00	1828	\$1,500 00			\$1,500 00
For arrearage due Major Burch for survey of the Raft of Red River, Louisiana	Mar. 2, 1831	4	460		187 50	1831	2,687 50			2,687 50
For improving the navigation of the Red River, Louisiana and Arkansas, being the balance of the appropriation of the year 1828, carried to the surplus fund, and the further sum of \$20,000	July 3, 1832	4	551	1	22,628 00	1832	965 00			965 00
For improving the navigation of the Red River	June 28, 1834	4	703		50,000 00	1834	21,663 00			21,663 00
For completing the removal of the obstructions to the navigation of Red River, in addition to the appropriation of \$50,000 made at the last session of Congress	Mar. 3, 1835	4	754		50,000 00	1835	49,751 00			49,751 00
For continuing the removal of obstructions in the Red River	July 2, 1836	5	68		40,800 00	1836	41,049 00			41,049 00
For the complete removal of the Great Raft in the Red River	Mar. 3, 1837	5	190	1	65,000 00	1837	65,151 04	\$151 04		65,000 00
For constructing a boat to prevent a new accumulation of obstruction in said river within the old limits of the Great Raft, so called, \$15,000, and the additional sum of \$15,000 to work and support the same	Apr. 20, 1838	5	228		70,000 00	1838	70,000 00			70,000 00
	July 2, 1836	5	68		30,000 00	1836	30,000 00			30,000 00
	Mar. 3, 1841	5	435	1	75,000 00	1841	22,500 00			22,500 00
For removing the Raft of Red River, under the direction of the Secretary of War						1842	14,236 87			14,236 87
						1843	12,000 00			12,000 00
						1844	24,520 00	7,223 67		17,305 33
						1845	8,957 80			8,957 80
For deficiency of appropriation for removing the Great Raft of Red River, made by the act approved April 20, 1838, being the amount advanced by Daniel T. Witlee and others through the branch of the Real Estate Bank of Washington, Ark., to Henry M. Shreve, government agent for such removal, and expended by him for that purpose	Mar. 2, 1847	9	152	2	7,150 00	1847	7,150 00	1,001 24		6,148 76
For removing the Raft of Red River; and that the Secretary of War be authorized to contract with the lowest responsible bidder within this appropriation for the removal of said Raft, after reasonable public notice						1850				
For the improvement of Tone's Bayou, Louisiana						1853			1,001 24	
	Aug. 30, 1852	10	57		100,000 00	1855	100,000 00			100,000 00
	June 10, 1872	17	372	1	20,000 00					
	June 10, 1872	17	373	1	150,000 00					
	Mar. 3, 1873	17	563	1	80,000 00	1873	196,000 00			196,000 00
	June 23, 1874	18	240	1	50,000 00	1874	54,000 00			54,000 00
	Mar. 3, 1875	18	459	1	20,000 00	1875	45,000 00	50		44,950 50
	Aug. 14, 1876	19	135	1	35,000 00	1876	25,000 00			25,000 00
						1877	35,000 50			35,000 50
For removing the Raft in Red River, Louisiana										
For removing Raft in Red River and closing Tone's Bayou										
For the purpose of opening the navigation of Red River above Shreveport, La., and keeping said navigation open and free from rafts, and for the purpose of preserving the vessels and boats of the United States employed in that work	Feb. 7, 1878	20	24		6,000 00	1878	6,000 00			6,000 00
For removing Raft in Red River and closing Tone's Bayou	June 18, 1878	20	153	1	24,000 00					
For removing snags and other obstructions from Red River	June 18, 1878	20	154	1	25,000 00					
	June 18, 1878	20	154	1	150,000 00	1879	84,000 00			84,000 00
For improving mouth of Red River	Mar. 3, 1879	20	366	1	40,000 00					
For removing Raft in Red River and closing Tone's Bayou	Mar. 3, 1879	20	366	1	15,000 00					
For removing obstructions from Red River	Mar. 3, 1879	20	366	1	22,500 00					
For improving Upper Red River, Arkansas, from Fulton to the head of the Raft	Mar. 3, 1879	20	371	1	10,000 00	1880	45,500 00			45,500 00

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.		Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.						
<i>Tennessee River—Kentucky, Tennessee, and Alabama.</i>									
For a survey of the Colbert Shoals, in the Tennessee River, to ascertain the nature of the obstructions, the practicability, the manner, and the expense of removing them.	Mar. 2, 1827	4	229	\$200 00	1828	\$200 00			\$200 00
For the improvement of the navigation of the Tennessee River, in conformity with the estimates of the War Department.	Aug. 30, 1852	10	60	50,000 00	1853	2,000 00			2,000 00
To pay the claim of Shade Calloway.	June 9, 1860	12	849	1,350 00	1854	42,309 00			42,309 00
The act of June 12, 1860, provides "That all contracts by the duly authorized officers of the Government, appointed under the act of 32d Congress making an appropriation of \$50,000 for the improvement of the Tennessee River, shall be audited by the accounting officers of the Treasury and paid out of any money in the Treasury not otherwise appropriated."	June 12, 1860	12	29		1855	5,691 00			5,691 00
For improvement of the Tennessee River, to be expended below Chattanooga.	June 12, 1860	12	29	212 41	1860	1,562 41			1,562 41
For the continuation of the work now in progress on the Tennessee River below Chattanooga, including the Muscle Shoals.	June 12, 1860	12	29	446 53	1861	446 53			446 53
For the improvement of the Tennessee River between Knoxville and Chattanooga.	June 12, 1860	12	29	748 00	1864	748 00			748 00
For the improvement of the Tennessee River below Chattanooga.	Mar. 3, 1871	16	226						
For the improvement of the Tennessee River above Chattanooga.	June 10, 1872	17	372	80,000 00	1871	20,000 00			20,000 00
For continuing the improvement of the Tennessee River above Chattanooga.	June 10, 1872	17	372	25,000 00					
For continuing the improvement of the Tennessee River below Chattanooga.	Mar. 3, 1873	17	563	100,000 00	1873	105,000 00			105,000 00
For continuing the improvement of the Tennessee River above Chattanooga.	Mar. 3, 1873	17	563	25,000 00	1874	70,000 00			70,000 00
For continuing the improvement of the Tennessee River below Chattanooga.	June 23, 1874	18	240	25,000 00					
For the improvement of the Tennessee River above Chattanooga.	June 23, 1874	18	240	100,000 00					
For the improvement of the Tennessee River below Chattanooga.	Mar. 3, 1875	18	458	40,000 00					
For the improvement of the Muscle Shoals.	Mar. 3, 1875	18	458	360,000 00	1875	135,000 00			135,000 00
For the improvement of the Tennessee River, \$15,000, to be expended above Chattanooga, and the remaining \$250,000 are to be expended upon Muscle Shoals.	Aug. 14, 1876	19	138		1876	115,000 00			115,000 00
For improving Tennessee River, continuing operations above Chattanooga.	June 18, 1878	20	154	270,000 00	1877	230,000 00			230,000 00
For improving Tennessee River, continuing operations below Chattanooga, including Muscle Shoals, \$15,000 of which sum, or so much thereof as may be necessary, to be expended in the improvement of Duck River Shoals on Tennessee River.	Mar. 3, 1879	20	367	15,000 00	1878	185,000 00			185,000 00
For improving Tennessee River above Chattanooga.	June 18, 1878	20	154	300,000 00	1879	390,000 00			390,000 00
For improving Tennessee River below Chattanooga, including Muscle Shoals, Duck River Shoal, and the shoal at Reynoldsburg.	Mar. 3, 1879	20	367	11,500 00					
For improving Tennessee River above Chattanooga.	Mar. 3, 1879	20	367	210,000 00	1880	361,500 00			361,500 00
For improving Tennessee River below Chattanooga, including Muscle Shoals, Duck River Shoal, and shoal at Reynoldsburg, continuing operations.	June 14, 1880	21	187	10,000 00					
For improving Tennessee River above Chattanooga.	June 14, 1880	21	187	300,000 00					
For improving Tennessee River below Chattanooga, including Muscle Shoals, Duck River Shoal, and shoal at Reynoldsburg, continuing operations.	Mar. 3, 1881	21	477	250,000 00					
For improving Tennessee River above Chattanooga.	Mar. 3, 1881	21	477	7,000 00	1881	277,073 60	\$73 60		277,000 00
					1882	291,270 00	1,270 00		290,000 00
Total				2,231,455 94		2,232,800 51	1,343 60		2,231,455 94
<i>Wabash River—Indiana and Illinois.</i>									
For surveying the obstructions to the navigation of the Wabash River between its mouth and Eel River	May 23, 1893	4	289	500 00	1893	1,000 00	500 00		500 00

For the improvement of the Wabash River, Indiana, commencing at its mouth.....	June 10, 1872	17	372	1	50,000 00	1873	35,000 00	.....	35,000 00	.....	35,000 00
For the improvement of the Wabash River, Indiana and Illinois.....	Mar. 3, 1873	17	563	1	50,000 00	1874	50,000 00	.....	50,000 00	.....	50,000 00
For continuing the improvement of the Wabash River, \$25,000: <i>Provided</i> , That a portion of this appropriation, not exceeding \$9,000, may be used by the Secretary of War, in his discretion, for the extinguishment of any right, title, or claim of the Wabash Navigation Company in the lock and dam at Grand Rapids on said river and other property said company may claim on said river, and for the extinguishment of any right said company may have to affect or interfere in any way with the navigation of said river; but no part of this appropriation shall be expended until said Navigation Company shall have relinquished all right to control or otherwise in any manner interfere with or affect the free navigation of said river.....	June 23, 1874	18	239	1	25,000 00	.....	.....	.....	.....	.....	.....
For the improvement of the Wabash River.....	Mar. 3, 1875	18	458	1	40,000 00	1875	40,000 00	.....	40,000 00	.....	40,000 00
	Aug. 14, 1876	19	137	1	70,000 00	1876	20,000 00	.....	20,000 00	.....	20,000 00
	June 18, 1878	20	155	1	50,000 00	1877	15,000 00	.....	15,000 00	.....	15,000 00
	Mar. 3, 1879	20	368	1	20,000 00	1878	33,000 00	.....	33,000 00	.....	33,000 00
	June 14, 1880	21	187	1	25,000 00	1879	92,000 00	.....	92,000 00	.....	92,000 00
	Mar. 3, 1881	21	478	1	50,000 00	1880	20,000 00	.....	20,000 00	.....	20,000 00
For improving Wabash River, one-half of which is to be used on the river above Vincennes.....	.....	.....	.....	.....	.....	1881	38,000 00	.....	38,000 00	.....	38,000 00
	.....	.....	.....	.....	.....	1882	37,000 00	.....	37,000 00	.....	37,000 00
Total.....	.....	.....	.....	.....	380,500 00	.....	381,000 00	.....	500 00	.....	380,500 00
<i>Waccamaw River—North Carolina and South Carolina.</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
For improving Waccamaw River, South Carolina, from the mouth up to Waccamaw Lake, North Carolina.....	June 14, 1880	21	191	1	15,000 00	1881	20,000 00	.....	20,000 00	.....	20,000 00
	Mar. 3, 1881	21	475	1	10,000 00	1882	16,630 71	.....	11,630 71	.....	5,000 00
Total.....	.....	.....	.....	.....	25,000 00	.....	36,630 71	.....	11,630 71	.....	25,000 00
<i>Warrior and Tombigbee Rivers—Alabama and Mississippi.</i>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
For the improvement of the Tombigbee River.....	June 10, 1872	17	375	1	10,000 00	1873	10,000 00	.....	10,000 00	.....	10,000 00
For the improvement of the Warrior and Tombigbee Rivers, Alabama, below Tuscaloosa and Demopolis, \$25,000, in addition to any unexpended balance remaining from the appropriation for the harbor of Mobile hereby transferred to this improvement.....	Mar. 3, 1875	18	461	1	25,000 00	1875	10,000 00	.....	10,000 00	.....	10,000 00
	.....	.....	.....	.....	.....	1876	15,000 00	.....	15,000 00	.....	15,000 00
For the improvement of the Warrior and Tombigbee Rivers, Alabama.....	Aug. 14, 1876	19	136	1	15,000 00	1877	15,000 00	.....	15,000 00	.....	15,000 00
For improving the Warrior and Tombigbee Rivers, Alabama and Mississippi; of which sum \$28,000 shall be expended on the Warrior and Tombigbee and \$12,000 on the Tombigbee above Columbus.....	June 18, 1878	20	153	1	40,000 00	1879	33,000 00	.....	33,000 00	.....	33,000 00
For improving Warrior and Tombigbee Rivers, Alabama and Mississippi; of which sum \$10,000 shall be expended on the Tombigbee above Columbus and \$20,000 on the Warrior and Tombigbee below Columbus.....	Mar. 3, 1879	20	365	1	30,000 00	1880	27,000 00	.....	27,000 00	.....	27,000 00
For improving Warrior and Tombigbee Rivers; of which sum \$20,000 shall be expended on the Warrior, \$12,000 on the Tombigbee between Columbus and Vienna, and \$15,000 on the Tombigbee below Vienna.....	June 14, 1880	21	186	1	47,000 00	1881	37,000 00	.....	37,000 00	.....	37,000 00
	June 14, 1880	21	186	1	4,000 00	.....	.....	.....	.....	.....	.....
	Mar. 3, 1881	21	476	1	1,000 00	.....	.....	.....	.....	.....	.....
For improving Tombigbee River above Columbus.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
For improving Warrior and Tombigbee Rivers, Alabama and Mississippi; to be expended in the same proportions as the appropriation under the act of June, 1880.....	Mar. 3, 1881	21	477	1	25,000 00	1882	50,000 00	.....	50,000 00	.....	50,000 00
Total.....	.....	.....	.....	.....	197,000 00	.....	197,000 00	.....	.....	.....	197,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>White, Black, and Saint Francis Rivers—Arkansas and Missouri.</i> For a survey of the White and Saint Francis Rivers in Arkansas. For a survey of the Saint Francis, Black, and White Rivers in Arkansas and Missouri, to determine upon the expediency of removing the natural raft thereon. For continuing the survey of Black and White Rivers, Arkansas and Missouri.	Mar. 2, 1833	4	645	.....	\$500 00	1833	\$500 00	.....	.....	\$500 00
	July 4, 1836	5	130	1	1,000 00	1836	1,000 00	.....	.....	1,000 00
	Mar. 3, 1837	5	190	1	1,000 00	1837	1,000 00	.....	.....	123 38
	.....	.....	.....	.....	.....	1839	.....	\$678 98	\$678 98	.....
	.....	.....	.....	.....	.....	1841	.....	197 64	197 64	.....
Total .....	.....	.....	.....	.....	2,500 00	.....	2,500 00	876 62	876 62	1,623 38
<i>Yellowstone River—Dakota and Montana.</i> For improving Yellowstone River, Montana and Dakota	Mar. 3, 1879	20	370	1	25,000 00	1880	25,000 00	.....	.....	25,000 00
	June 14, 1880	21	192	1	15,000 00	1881	13,575 00	.....	.....	13,575 00
	Mar. 3, 1881	21	479	1	20,000 00	1882	21,425 00	.....	.....	21,425 00
	.....	.....	.....	.....	.....	.....	60,000 00	.....	.....	60,000 00

<i>Repairs and extension of public works on rivers and harbors.</i> For the repair, extension, and completion of certain public works on rivers and harbors, to be expended under the direction of the Secretary of War: <i>Provided</i> , That said expenditures shall not be applied to any works not mentioned in the bill "making appropriations for repairs, preservation, and completion of certain public works, and for other purposes," which passed the House of Representatives June 30, 1868 ... For the repair, extension, preservation, and completion of works for the improvement of rivers and harbors, under the direction of the Secretary of War: <i>Provided</i> That the Secretary of War is hereby authorized to cause such expenditures to be made so as best to subserve the interests of commerce; and he is required to report to Congress, at the opening of its December session, all expenditures made under the provisions of this act up to that time in detail	July 25, 1868	15	174	1	1,500,000 00	.....	802,141 94	933 53	.....	801,188 41
	Apr. 10, 1869	16	44	1	2,000,000 00	1869	1,953,727 59	5,298 55	.....	1,948,429 04
	.....	.....	.....	.....	.....	1870	668,146 92	32,130 15	.....	636,016 77
	.....	.....	.....	.....	.....	1871	44,000 00	3,910 63	.....	21,988 80
	.....	.....	.....	.....	.....	1872	2,921 10	21,721 67	.....	20,719 88
	.....	.....	.....	.....	.....	1873	20,725 87	5 99	.....	29,000 00
	.....	.....	.....	.....	.....	1875	29,000 00	.....	.....	13,352 04
	.....	.....	.....	.....	.....	1876	45,500 00	32,147 96	.....	30,005 06
	.....	.....	.....	.....	.....	1877	30,005 06	.....	.....	3,500,000 00
	.....	.....	.....	.....	.....	1878	3,596,168 48	96,168 48	.....	.....

<i>Repairs of harbors on the Lakes.</i> For the preservation and repair of harbors on the lakes, other than those enumerated, the construction of which has been authorized by law, and which have been partially completed.....	June 11, 1844	5	662	.....	20,000 00	1845	18,093 66	22 26	.....	18,071 40
	.....	.....	.....	.....	.....	1846	1,386 82	10 80	.....	1,376 02
	.....	.....	.....	.....	.....	1847	412 43	.....	.....	412 43
	.....	.....	.....	.....	.....	1848	140 15	.....	.....	13 21
	.....	.....	.....	.....	.....	1851	.....	126 94	.....	.....
	.....	.....	.....	.....	.....	1852	126 94	.....	.....	56 33
	.....	.....	.....	.....	.....	1854	.....	70 61	70 61	.....
	June 28, 1864	13	300	1	250,000 00	1865	101,600 00	.....	.....	101,600 00
	.....	.....	.....	.....	.....	1866	61,500 00	9 98	.....	61,490 02
	.....	.....	.....	.....	.....	1867	18,500 00	44 82	.....	18,455 18
	.....	.....	.....	.....	.....	1868	6,004 00	130 44	.....	5,873 56

<p>To be expended under the direction of the Secretary of War, in protecting the commerce of the lakes by causing the public works connected with the harbors on Lakes Champlain, Ontario, Erie, Saint Clair, Huron, Michigan, and Superior to be repaired and made useful for purposes of commerce and navigation, so far as the same, in his judgment, may be necessary.</p>						1869	35,500 00				70 48		35,429 62
						1870	16,996 35				1,830 21		13,424 33
						1871							
						1873					2,071 42		
						1875	5,433 00						5,433 00
						1876	1,000 00						1,000 00
						1877	900 00						900 00
						1878	2,380 04						2,380 04
						1879	2,700 00						2,700 00
						1881	1,314 35						1,314 35
Total							274,317 35			4,387 96	70 61		269,929 39
<p><i>Preservation and repair of harbor and river improvements.</i> For arrearages due for roads, harbors, and rivers where public works and improvements have hitherto been made, and for the protection of public property now on hand at these places, and for arrearages for surveys and completing maps authorized by act of March 3, 1839. For arrearages and for the preservation of the public property at the several places of harbor and river improvement.</p>	Mar. 3, 1841	5	460	3		1841	26,565 14						26,565 14
	Aug. 23, 1842	5	510	1									
	Aug. 33, 1842	5	510										
						1842	41,335 65						41,335 65
						1843	14,113 40			8 75			14,104 65
						1844	3,189 13			219 45			1,641 20
						1845	22 26			1,350 74	2 62		622 07
						1846	1,337 63						
						1849				665 70			
						1850	847 13			337 33			
<p>For the preservation and repairs of public works heretofore constructed for the improvement of harbors</p>						1851	169 01						
						1853	204 65			657 10	452 45		
						1854			12 76				
						1855	23 58			69 13	45 55		
						1856			12 39		12 39		
						1862	5 50			204 20			
						1863				198 70			
						1869				6 82			
						1872							
Total							85,000 00			3,544 37	731 29		84,268 71
<p><i>Repairs and contingencies, Atlantic Coast.</i> For the repairs, preservation, and contingencies of the harbor works on the Atlantic coast.</p>	Aug. 30, 1852	10	60			1853	3,281 60						3,281 60
						1854	1,238 51						1,238 51
						1855	5,479 89						4,137 40
						1856	48 80			94 74			
						1857	55 73			9 79			
	June 28, 1864	13	201	2		1864				1,342 49			
						1865	12,500 00			120 00			12,380 00
						1866	30,800 00			10,368 19			20,431 81
						1867	46,000 00			641 60			45,358 40
						1868	16,010 10						16,010 10
<p>To be expended under the direction of the Secretary of War, in repairing and rendering useful for purposes of commerce and navigation such of the public works connected with the harbors on the seaboard of the United States as may, in his judgment, need such expenditure.</p>						1869	7,174 28			41 93			6,389 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Transportation, fuel, &c.—Continued.</i> For transportation of officers, and for fuel and quarters, the payment of which is no longer made by the Quartermaster's Department.....	May 15, 1856	11	13	1	\$2, 127 12	1856	\$455 85	\$0 41	.....	\$485 44
	1857	872 05	.....	.....	872 05
	1858	8 20	.....	.....	8 20
	1859	453 10	55 04	.....	398 06
	1861	9 29	6 24	.....	3 05
	1862	846 17	.....	.....	542 86
	1863	311 42	422 23	\$171 31	.....
	1869	132 00	132 00	.....	.....
	1870	.....	.....	.....	.....
	1871	.....	132 00	132 00	.....
	1872	.....	.....	.....	.....
Total	12, 127 12	.....	15, 749 44	3, 925 63	303 31	11, 823 81
SURVEYS.										
<i>Atlantic Coast.</i> For examination and survey of works of improvement for which appropriations have been made, and concerning which no sufficient information is now in possession of the department, and for examination and survey at other points in this act specified, that is to say, on the Atlantic coast....	June 23, 1866	14	71	1	30, 000 00	1867	21, 750 00	.....	.....	21, 750 00
	Mar. 2, 1867	14	418	1	30, 000 00	1868	49, 883 38	20, 678 83	.....	29, 004 50
	1869	7, 983 04	4, 743 03	.....	2, 540 01
	1870	2, 731 46	29	.....	2, 731 17
	1871	2, 518 16	77 79	.....	2, 414 45
	1872	.....	25 92	.....	.....
	1873	1, 500 00	.....	.....	1, 500 00
	1877	59 87	.....	.....	59 87
	60, 000 00	.....	85, 525 91	25, 525 91	.....	60, 000 00

<i>Pacific Coast.</i>	June 23, 1866	14	71	1	25, 000 00	1867	10, 445 75	.....	.....	10, 445 75
	Mar. 2, 1867	14	418	1	25, 000 00	1868	16, 018 11	203 75	.....	15, 814 36

NOTE.—The act of June 23, 1866, provides, "That the Secretary of War, when the public interests require it, shall cause examinations or re-examinations to be made, with suitable surveys of the works aforesaid, and all other works provided for by this act, and shall make such changes or modifications of the plans heretofore adopted for their improvement as shall be necessary and proper. And he shall cause such needful examination of other harbors and places in the fourth section of this act specified, upon the sea and lake coasts, and on western rivers, to be made as will enable him to determine what improvements thereof are required to render them safe and convenient for the navigation of the naval and commercial vessels of the United States, and the cost of such improvements, and he shall make full report thereof, and of the plans deemed advisable therefor, to Congress, at the commencement of the next session, for such action as may be judged expedient and right. And if, upon such examinations and survey of works and concerning which no sufficient information is now in the possession of the department, there shall remain an unexpended balance of appropriation properly applicable thereto from the sums herein appropriated, which may, in the judgment of the Secretary of War, be judiciously applied toward the economical and needful continuation or completion of such works, the Secretary of War shall direct such balance to be applied and used accordingly; but no moneys shall be used for such purposes excepting from the balances remaining from appropriations herein made for the specific examination and survey of such works."

For examination and survey of works of improvement for which appropriations have been heretofore made, and concerning which no sufficient information is now in possession of the department, and for examination and survey at other points in this act specified, that is to say, on the Pacific coast.....

Total..... 50,000 00

NOTE.—See note to "Surveys, Atlantic Coast," page 264.

Northwestern Lakes.

For examination and survey of works of improvement for which appropriations have been heretofore made, and concerning which no sufficient information is now in possession of the department, and for examination and survey at other points in this act specified, that is to say, on the northwestern lakes.....

Total..... 175,000 00

NOTE.—See note to "Surveys, Atlantic Coast," page 264.

Western and Northwestern Rivers.

For examination and survey of works of improvement for which appropriations have been heretofore made, and concerning which no sufficient information is now in possession of the department, and for examination and survey at other points in this act specified, that is to say, on the western and northwestern rivers.....

Total..... 275,000 00

NOTE.—See note to "Surveys, Atlantic Coast," page 264.

Atlantic and Pacific Coasts, Lakes, and Rivers.

For examinations and surveys for improvements on the north and northwestern lakes and rivers, and the Atlantic and Pacific coasts, and for contingencies of rivers and harbors not provided for in this act.....

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Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of act making the appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Atlantic and Pacific Coasts, Lakes, and Rivers</i> —Continued. For incidental repairs of harbors, for which there is no special appropriation provided by law, and for examination and survey of such rivers and harbors as, in the judgment of the Secretary of War, will subserve the general interests of commerce.....	Ang. 14, 1876	19	139	2	\$40,000 00	1877	\$12,882 75			\$12,882 75
	June 18, 1878	20	262	3	150,000 00	1878	21,529 12			21,529 12
	Mar. 3, 1879	20	375	3	150,000 00	1879	160,305 68	\$3,008 29		157,297 39
	June 14, 1880	21	197	1	150,000 00	1880	128,124 33			128,124 33
	Mar. 3, 1881	21	484	1	50,000 00	1881	175,500 00			175,500 00
Total					1,265,000 00	1882	61,601 26	1,357 37		60,243 89
Balance							1,270,812 58	16,027 42		1,254,785 16
NOTE.—See note to "Surveys, Atlantic Coast," page 264.										
<i>Hydrographic Survey of the Lakes.</i> For a hydrographic survey of the coasts of the northern and northwestern lakes of the United States, to be expended under the direction of the President..... For the continuation of the survey of the northern and southern lakes of the United States..... For continuation of the surveys of the northern and northwestern lakes of the United States.....	July 3, 1841	5	431	1	15,000 00	1841	13,392 00			13,392 00
	May 18, 1842	5	485	170	20,000 00	1842	6,539 00			6,539 00
						1843	6,640 00	139 85		6,500 15
	Mar. 1, 1843	5	605	1	30,000 00	1844	27,550 29			27,550 29
	June 17, 1844	5	698	1	20,000 00	1845	30,934 47			30,934 47
For continuing the surveys of the northern and northwestern lakes..... For the further prosecution of the survey of the northern and northwestern lakes..... For continuing the survey of the northern and northwestern lakes..... For continuing the surveys of the northern and northwestern lakes, including Lake Superior..... For continuing the survey of the northern and northwestern lakes, including Lake Superior: <i>Provided</i> , That a survey of so much of the communication between Lake Huron and the Sault Ste. Marie as may be necessary to ascertain what part thereof requires to be deepened, shall be made without delay, and plans and estimates of the nature and expense of the work shall be laid before Congress at its next session....	Mar. 3, 1845	5	747		20,000 00	1846	16,580 40	39 79		16,540 61
	Aug. 8, 1846	9	70	1	25,000 00	1847	11,296 91			11,296 91
						1848	13,713 75			13,713 75
	Aug. 12, 1848	9	294	1	25,000 00	1849	19,632 82			19,632 82
	Mar. 3, 1849	9	363	1	10,000 00	1850	15,988 80			15,988 80
For continuing the survey of the northern and northwestern lakes, including Lake Superior: <i>Provided</i> , That a survey of so much of the communication between Lake Huron and the Sault Ste. Marie as may be necessary to ascertain what part thereof requires to be deepened, shall be made without delay, and plans and estimates of the nature and expense of the work shall be laid before Congress at its next session....	Sept. 28, 1850	9	507	1	25,000 00	1851	19,154 20	362 40		18,791 80
	Mar. 3, 1851	9	620	1	25,000 00	1852	19,147 16			19,147 16
	Aug. 30, 1852	10	58		25,000 00	1853	28,113 76			28,113 76
For continuing the survey of the northern and northwestern lakes, including Lake Superior..... For continuing the survey of the northern and northwestern lakes, including Lake Superior: <i>Provided</i> , That a survey of so much of the communication between Lake Huron and the Sault Ste. Marie as may be necessary to ascertain what part thereof requires to be deepened, shall be made without delay, and plans and estimates of the nature and expense of the work shall be laid before Congress at its next session....	Mar. 3, 1853	10	201	1	50,000 00	1854	33,196 92	25		33,196 67
	Aug. 5, 1854	10	579	1	50,000 00	1855	48,764 49	247 95		48,516 54
	Mar. 3, 1855	10	638	1	50,000 00	1856	40,034 74			40,034 74
	Aug. 30, 1856	11	150		50,000 00	1857	56,662 17			56,662 17
	Mar. 3, 1857	11	203	1	50,000 00	1858	66,000 00			66,000 00
For continuing the survey of the northern and northwestern lakes, including Lake Superior: <i>Provided</i> , That a survey of so much of the communication between Lake Huron and the Sault Ste. Marie as may be necessary to ascertain what part thereof requires to be deepened, shall be made without delay, and plans and estimates of the nature and expense of the work shall be laid before Congress at its next session....	June 12, 1858	11	335	1	75,000 00	1859	56,500 00			56,500 00
	Mar. 3, 1859	11	433	1	75,000 00	1860	83,000 00	3,231 99		79,768 01
	June 21, 1861	12	66	1	75,000 00					
	Mar. 2, 1861	12	203	1	75,000 00	1861	75,000 00			75,000 00
	July 5, 1862	12	508	1	105,000 00	1862	31,447 79	8 18		31,439 61
For continuing the survey of the northern and northwestern lakes, including Lake Superior..... For continuing the survey of the northern and northwestern lakes, including Lake Superior: <i>Provided</i> , That a survey of so much of the communication between Lake Huron and the Sault Ste. Marie as may be necessary to ascertain what part thereof requires to be deepened, shall be made without delay, and plans and estimates of the nature and expense of the work shall be laid before Congress at its next session....	Feb. 9, 1863	12	646	1	106,879 00	1863	60,160 00			60,160 00
	July 2, 1864	13	354		89,500 00	1864	89,500 00			89,500 00
	Feb. 28, 1865	13	444		133,000 00	1865	133,000 00			133,000 00
	June 12, 1866	14	62		137,681 11	1866	137,681 11			137,681 11
	Mar. 2, 1867	14	484	1	126,000 00	1867	126,000 00			126,000 00
For continuing the survey of the northern and northwestern lakes, including Lake Superior.....	Mar. 2, 1867	14	484	1	132,143 09	1868	132,143 09			132,143 09
	July 20, 1868	15	112	1	108,500 00	1869	108,500 00			108,500 00

[illegible]

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

General object (title of appropriation), and details and explanations.	Date of appropriation.	Reference to the Stats. at Large.			Amount of annual appropriation.	Year of expenditure.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.
		Volume.	Page.	Section.						
<i>Steam dredging-machines for the Lakes—Continued.</i>										
For constructing a steam dredge, equipment and discharging scows for Lake Michigan.....	Aug. 30, 1852	10	58		\$20,000 00	1853	\$116 95			\$116 95
To pay a balance due Lyon and Howard.....	Mar. 3, 1855	10	967		8,617 81	1854	15,696 70			15,696 70
For the construction of a steam dredge, equipment and discharging scows, for the waters of the Chesapeake Bay and the Atlantic coast.....	Aug. 30, 1852	10	58		20,000 00	1853	12,804 16			12,804 16
For constructing a steam dredge, equipment and discharging scows for Lake Ontario.....	Aug. 30, 1852	10	59			1854	4,000 00			4,000 00
						1855	12,500 00			12,500 00
						1856	3,500 00			3,500 00
						1857	116 97			116 97
						1858	19,718 94			19,718 94
						1859	164 09			164 09
						1860	116 95			116 95
For constructing a steam dredge, equipment and scows for Lake Champlain, and improving navigation thereof.....	Aug. 30, 1852	10	60		20,000 00	1853	19,248 53			19,248 53
						1854	634 52			634 52
						1855		\$453 18	\$453 18	
						1856		646 05	646 05	
						1857				
						1858				
To supply a deficiency in the appropriation for building four steam dredge-boats in use by the War Department on Lakes Champlain, Erie, Michigan, and Ontario, to be applied for materials, machinery, tools, and labor furnished in painting said boats.....	Mar. 3, 1855	10	670	10	1,696 15	1856	1,110 66			1,110 66
						1862			585 49	
Total.....					122,682 95		122,097 47	1,741 87	2,327 36	120,355 60
<i>Snag-boats and dredge-boats.</i>										
For the construction and repair of snag-boats, dredge-boats, discharging scows, and machinery to be used on the Mississippi, Ohio, Missouri, Arkansas, and other western rivers ..	Aug. 30, 1852	10	56		150,000 00	1853	140,596 00			140,596 00
						1854	848 02			848 02
						1855	8,555 98			8,555 98
						1856		62 84		
						1860		338 40		
						1862		1 03		
						1863			63 87	
						1865		103 39	103 39	
For building and operating two dredges and snag-boats, to be used on the Mississippi River between Fort Snelling and Rock Island Rapids.....	Mar. 2, 1867	14	421	1	96,000 00	1867	10,000 00			10,000 00
						1868	245,367 81			245,367 81
						1869	82,400 00	8,700 00		82,400 00
						1870	187,928 64			187,928 64
						1871	22,413 47	20 77		22,392 70
						1872	7,610 85			7,610 85
For construction of snag-boats and other apparatus for clearing western rivers, and for the outfit, working, and preservation thereof.....	June 23, 1866	14	71	1	550,000 00	1867	10,000 00			10,000 00
						1868	65,000 00			65,000 00
						1869	20,750 00			20,750 00
						1870	210 06			210 06
						1872		39 94		
Total.....					796,000 00		804,680 83	9,226 43	545 60	795,454 40
<i>Construction of an iron steamer.</i>										
For an iron steamer to be used in the survey of the northern and northwestern lakes, including Lake Superior, under the War Department.....	Aug. 5, 1854	10	578	1	50,000 00	1855	284 48			284 48
						1856	715 52			715 52
						1857	49,000 00			49,000 00
Total.....					50,000 00		50,000 00			50,000 00

Statement of appropriations and expenditures for rivers and harbors, &c.—Continued.

RECAPITULATION OF RIVERS AND HARBORS BY STATES AND LOCALITIES.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balance June 30, 1882.
ALABAMA.							
Alabama River	117	\$100,000 00	\$95,000 00			\$95,000 00	\$5,000 00
Chattahoochee and Flint Rivers (Alabama, Florida, and Georgia)	225						
Choctawhatchie River (Alabama and Florida)	225						
Coosa River (Alabama and Georgia)	226						
Escambia River (Alabama and Florida)	229						
Mobile Harbor	117	967,701 82	839,883 18	\$12,241 43	\$10,000 07	847,641 75	110,000 00
Pass au Meron	118	24,050 00	14,950 00	1,449 38	10,549 38	13,500 62	
Tennessee River (Alabama, Kentucky, and Tennessee)	260						
Warrior and Tombigbee Rivers (Alabama and Mississippi)	261						
Total		1,091,751 82	969,833 18	13,690 81	20,609 45	956,142 37	115,000 00
ARKANSAS.							
Arkansas River (Arkansas, Indian Territory, and Kansas)	224						
Bayou Bartholomew (Arkansas and Louisiana)	225						
Black River (Arkansas and Missouri)	225						
Current River (Arkansas and Missouri)	228						
Fouche Le Fevre River	119	17,000 00	17,000 00			17,000 00	
L'Anguille River	119	17,000 00	15,500 00			15,500 00	1,500 00
Little Missouri River	119	20,000 00	20,000 00			20,000 00	
Mississippi River (Arkansas, Illinois, Iowa, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Tennessee, and Wisconsin)	230-43						
Ouachita River (Arkansas and Louisiana)	257						
Red River of the South (Arkansas, Louisiana, and Texas)	258						
Saint Francis River	119	15,000 00	15,000 00			15,000 00	
Saline River	119	12,500 00	12,500 00			12,500 00	
White River	119	103,000 00	103,000 00			103,000 00	
White, Black, and Little Red Rivers	119	10,000 00	10,000 00			10,000 00	
White, Black, and Saint Francis Rivers (Arkansas and Missouri)	262						
White and Saint Francis Rivers	120	122,000 00	122,000 00			122,000 00	
Total		316,500 00	315,000 00			315,000 00	1,500 00
CALIFORNIA.							
Humboldt Harbor	120	40,000 00	40,000 00			40,000 00	
Oakland Harbor	120	535,000 00	473,000 00			473,000 00	62,000 00
Petaluma Creek	120	16,000 00	8,000 00			8,000 00	8,000 00
Sacramento River	120	140,000 00	135,000 00			135,000 00	5,000 00
Sacramento and Feather Rivers	120	15,000 00	15,000 00			15,000 00	
San Diego River	121	111,000 00	111,000 00			111,000 00	
San Francisco Harbor	121	75,000 00	73,500 00	2,328 57		71,171 43	3,828 57
San Joaquin River	121	80,000 00	75,000 00			75,000 00	5,000 00
Straits of Fuca and San Francisco, harbor of refuge between	121	150,000 00	10,257 11			10,257 11	139,742 89
Wilmington Harbor	121	555,000 00	555,000 00			555,000 00	
Total		1,717,000 00	1,495,757 11	2,328 57		1,493,428 54	223,571 46

Recapitulation of rivers and harbors by States and localities—Continued.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balance June 30, 1882.
CONNECTICUT.							
Bridgeport Harbor.....	121	\$195,000 00	\$195,000 00	\$143 20	\$143 20	\$194,856 80	.....
Cedar Point Beach.....	122	1,000 00	1,000 00	.....	.....	1,000 00	.....
Connecticut River.....	122	355,130 00	335,130 00	69 06	69 06	335,060 94	\$20,000 00
Housatonic River.....	123	64,000 00	64,000 00	.....	.....	64,000 00	.....
Little Narragansett Bay (Connecticut and Rhode Island)	230	.....	.....	.....	.....	.....	.....
Millford Harbor.....	123	33,000 00	33,000 00	.....	.....	33,000 00	.....
Mill River.....	123	10,587 43	10,587 43	.....	.....	10,587 43	.....
New Haven Breakwater.....	123	120,000 00	120,000 00	.....	.....	120,000 00	.....
New Haven Harbor.....	123	201,000 00	201,000 00	250 56	250 56	200,749 44	.....
New London Harbor.....	124	4,300 00	4,300 00	.....	.....	4,300 00	.....
Norwalk Harbor.....	124	63,080 00	63,080 00	.....	.....	63,080 00	.....
Pawcatuck River (Connecticut and Rhode Island)	257	.....	.....	.....	.....	.....	.....
Saybrook Harbor.....	124	39,181 57	23,971 57	550 09	15,700 00	23,421 48	.....
Southport Harbor.....	124	17,500 00	17,500 00	.....	.....	17,500 00	.....
Stamford Harbor.....	125	100 00	100 00	16 60	16 60	83 40	.....
Stonington Harbor.....	125	239,453 83	237,283 02	6 37	2,177 18	237,276 65	.....
Thames River.....	125	224,150 00	204,704 58	560 12	5 54	204,144 46	20,000 00
Westport (or Sangatuck) Harbor.....	126	18,444 00	20,514 10	2,126 13	56 03	18,357 97	.....
Total.....		1,585,926 83	1,531,170 70	3,722 13	18,478 26	1,527,448 57	40,000 00
DELAWARE.							
Broad Creek.....	126	15,000 00	15,000 00	.....	.....	15,000 00	.....
Breadkiln River.....	126	20,000 00	11,100 00	.....	.....	11,100 00	8,900 00
Delaware Breakwater.....	126	2,417,103 70	2,203,591 27	8,779 76	222,292 19	2,194,811 51	.....
Duck Creek.....	127	8,000 00	8,000 00	.....	.....	8,000 00	.....
Lewes Pier.....	127	355,500 00	357,119 77	1,619 77	.....	355,500 00	.....
Mispillion Creek.....	128	10,500 00	10,500 00	.....	.....	10,500 00	.....
New Castle Harbor.....	128	234,468 99	221,537 28	5,353 34	18,285 05	216,183 94	.....
Reedy Island Harbor.....	128	95,736 00	95,801 97	266 00	140 03	95,535 97	.....
Saint Jones River.....	129	5,000 00	5,000 00	.....	.....	5,000 00	4,500 00
Wilmington Harbor.....	129	165,856 00	140,204 68	3,759 90	2,411 22	136,444 78	27,000 00
Total.....		3,327,164 69	3,063,414 97	19,778 77	243,128 49	3,043,636 20	40,400 00
FLORIDA.							
Appalachicola River.....	129	98,750 29	88,850 29	157 97	10,057 97	88,692 32	.....
Cedar Keys Harbor.....	130	82,500 00	82,500 00	.....	.....	82,500 00	.....
Chattahoochee and Flint Rivers (Florida, Alabama, and Georgia)	225	.....	.....	.....	.....	.....	.....
Chipola River.....	130	9,000 00	3,000 00	.....	6,000 00	3,000 00	.....
Choctawhatchie River (Florida and Alabama)	225	.....	.....	.....	.....	.....	.....
Cumberland Sound (Florida and Georgia)	228	.....	.....	.....	.....	.....	.....
Escambia River (Florida and Alabama)	229	.....	.....	.....	.....	.....	.....
Indian River.....	130	6,500 00	5,000 00	5 06	1,505 06	4,994 94	.....
Ochlawaha River.....	131	10,000 00	6,000 00	2,088 05	6,088 05	3,911 95	.....
Ochlechny River.....	131	5,000 00	5,000 00	.....	.....	5,000 00	.....
Pear Creek.....	131	7,000 00	7,000 00	.....	.....	7,000 00	.....
Pensacola Harbor.....	131	90,000 00	45,000 00	.....	.....	45,000 00	45,000 00
Saint Augustine Harbor.....	131	33,569 80	32,651 66	178 23	96 37	33,473 43	.....
Saint John's River.....	131	319,000 00	315,000 00	827 17	827 17	314,172 83	4,000 00
Saint John's and Saint Mary's Rivers (Florida and Georgia)	259	.....	.....	.....	.....	.....	.....
Saint Mark's River.....	132	37,530 00	36,191 75	180 89	1,519 14	36,010 86	.....

132	Swansee River.....	23,000 00	18,154 02			4,845 98	18,154 02	
132	Tampa Bay.....	20,000 00	20,000 00				20,000 00	
133	Volusia Bay.....	10,500 00	10,500 00				10,500 00	
133	Withlacoochee River.....	7,500 00	7,500 00				7,500 00	
133	Yellow River.....	500 00	500 00	57 51	57 51		442 49	
	Total.....	760,350 09	683,847 72	3,494 88	30,997 25		49,000 00	
GEORGIA.								
133	Altamaha River.....	5,000 00	5,000 00				5,000 00	
133	Brunswick Harbor.....	45,000 00	35,044 00			9,956 00	35,044 00	
225	Chattahoochee and Flint Rivers (Georgia, Alabama, and Florida).....							
226	Coosa River (Georgia and Alabama).....							
228	Cumberland Sound (Georgia and Florida).....							
133	Darien Harbor.....	8,000 00	8,000 00				8,000 00	
133	Etowa River.....	10,000 00	1,237 80				1,237 80	8,702 20
133	Flint River.....	52,000 00	52,000 00				52,000 00	
133	Ockmulgee River.....	49,000 00	49,000 00				49,000 00	
134	Oconee River.....	15,500 00	15,500 00				15,500 00	
134	Oostanaula and Coosawatie Rivers.....	25,000 00	25,000 00				25,000 00	
134	Saint Augustine's Creek.....	5,000 00	1,582 34				1,582 34	3,417 66
259	Saint John's and Saint Mary's Rivers (Georgia and Florida).....							
134	Savannah Harbor.....	582,000 00	582,000 00				582,000 00	
134	Savannah River.....	606,096 64	582,731 12	2,402 06	25,767 58		580,329 06	
135	Survey of rivers.....	10,000 00	10,000 00	629 13	629 13		9,370 87	
	Total.....	1,412,596 64	1,367,095 26	3,031 19	36,352 71		1,364,064 07	12,179 86
IDAHO.								
135	Lower Clearwater River.....	10,000 00	10,000 00				10,000 00	
ILLINOIS.								
233	Andalusia Harbor (Mississippi River).....							
135	Calumet Harbor.....	277,000 00	285,000 00	8,000 00			277,000 00	
136	Chicago Harbor.....	1,389,305 00	1,355,002 57	15,697 67			1,339,304 90	50,000 00
137	Galeana River.....	66,000 00	66,000 00				66,000 00	
137	Illinois River.....	896,000 00	630,000 00				630,000 00	265,000 00
230	Mississippi River (Illinois, Missouri, &c.).....							
248	Mississippi and Missouri Rivers (Illinois, Missouri, &c.).....							
255	Ohio River (Illinois, Kentucky, &c.).....							
235	Quincy Bay (Mississippi River).....							
233	Rock Island Harbor (Mississippi River).....							
233	Rock Island Rapids (Mississippi River).....							
260	Wabash River (Illinois and Indiana).....	45,000 00	40,010 61	10 61			40,000 00	5,000 00
137	Waukegan Harbor.....							
	Total.....	2,672,305 00	2,376,013 18	23,708 28	10		2,352,304 90	320,000 00
INDIANA.								
137	Michigan City Harbor.....	721,203 92	722,700 69	1,501 92	5 15		721,198 77	
255	Ohio River (Indiana, Illinois, Kentucky, &c.).....							
260	Wabash River (Indiana and Illinois).....							
138	White River.....	65,000 00	65,000 00				65,000 00	
	Total.....	786,203 92	787,700 69	1,501 92	5 15		786,198 77	
IOWA.								
234	Burlington Harbor (Mississippi River).....							
251	Council Bluffs (Missouri River).....							
139	Des Moines and Iowa Rivers.....	1,000 00	1,000 00	86	86		999 14	
234	Des Moines Rapids (Mississippi River).....							
233	Dubuque Harbor (Mississippi River).....							
234	Fort Madison Harbor (Mississippi River).....							
233	Guttenberg Harbor (Mississippi River).....							

Recapitulation of rivers and harbors by States and localities—Continued.

Localities.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balance June 30, 1882.
IOWA—Continued.							
Mississippi River (Iowa, Illinois, &c.)	230						
Missouri River (Iowa, Nebraska, &c.)	251						
Muscatine Harbor (Mississippi River)	233						
Red Cedar River	139	\$1,500 00	\$1,500 00			\$1,500 00	
Rock Island Rapids (Mississippi River)	233						
Stonx City (Missouri River)	251						
Total		2,500 00	2,500 00	\$0 86	\$0 86	2,499 14	
KENTUCKY.							
Big Sandy River	139	129,000 00	39,500 00			39,500 00	\$89,500 00
Cumberland River (Kentucky and Tennessee)	227						
Kentucky River	139	325,000 00	325,000 00			325,000 00	
Mississippi River (Kentucky, Missouri, &c.)	230						
Ohio River (Kentucky, Indiana, &c.)	255						
Ohio River, Falls, and Canal	254						
Tennessee River (Kentucky, Alabama, and Tennessee)	260						
Tradewater River	140	3,000 00	3,000 00			3,000 00	
Total		457,000 00	367,500 00			367,500 00	89,500 00
LOUISIANA.							
Amito River	140	13,000 00	300 00			300 00	12,700 00
Bayou Bartholomew (Louisiana and Arkansas)	225						
Bayou Black	140	10,000 00	5,000 00			5,000 00	5,000 00
Bayou Boeuf	140	5,000 00	5,000 00			5,000 00	
Bayou Courtableau	140	15,000 00	9,000 00			9,000 00	6,000 00
Bayou La Fourche	141	27,500 00	24,500 00	2,013 98	2,013 98	22,486 02	3,000 00
Bayou Teche	141	69,200 00	22,185 21	1,222 48	5,237 27	20,962 73	43,000 00
Bayou Terrebonne	141	14,800 00	12,800 00			12,800 00	6,000 00
Bayou l'Enfer	141	27,000 00	27,000 00			27,000 00	
Calcasieu Pass	141	3,000 00					3,000 00
Calcasieu River	141	7,500 00	5,500 00	279 00	779 00	5,221 00	1,500 00
Chifumete River	228						
Cypress Bayou (Louisiana and Texas)	142	25,000 00	25,000 00	557 67	557 67	24,442 33	
Lake Pontchartrain Harbor	230						
Mississippi River (Louisiana, Mississippi, &c.)	237						
New Orleans Harbor (Mississippi River)	257						
Ouachita River (Louisiana and Arkansas)	258						
Red River of the South (Louisiana, Arkansas, and Texas)	142	9,500 00	7,500 00	102 50	102 50	7,397 50	2,000 00
Tangipahoa River	142	3,000 00	3,000 00			3,000 00	
Tensas River	142	2,000 00					2,000 00
Tickfaw River	142	9,900 00	5,200 00			5,200 00	4,700 00
Vermillion River	142						
Total		245,400 00	151,985 21	4,175 63	8,690 42	147,809 58	88,900 00
MAINE.							
Belfast Harbor	143	26,200 00	23,033 76		166 24	23,033 76	3,000 00
Camden Harbor	143	30,000 00	30,000 00			30,000 00	
Cathance River	143	16,000 00	16,000 00			16,000 00	
Cobscook Bay	143	5,300 00	5,300 00	1,126 49	1,126 49	4,173 51	
Gut opposite Bath	143	45,500 00	45,500 00			45,500 00	

143	Kennebec River.....	145,520 32	154,417 95	9,265 82	368 19	145,152 13	.....
144	Kennebunk River.....	65,175 00	65,175 00	83 49	83 49	65,091 51	.....
144	Lubec Channel.....	75,000 00	44,000 00	.....	.....	44,000 00	31,000 00
145	Machias River.....	32,000 00	32,000 00	.....	.....	32,000 00	.....
145	Matineus Island Breakwater.....	1,000 00	1,000 00	837 70	837 70	162 30	.....
145	Moosabec Bar.....	10,000 00	10,000 00	.....	.....	10,000 00	.....
145	Narragansett River.....	22,000 00	22,000 00	.....	.....	22,000 00	.....
145	Owl's Head Harbor.....	17,902 11	32,688 56	14,791 40	4 95	17,897 16	.....
145	Penobscot River.....	198,300 00	198,300 00	2 70	2 70	198,297 30	.....
146	Piscataqua River.....	8,510 00	8,510 00	9 78	9 78	8,500 22	.....
146	Portland Harbor.....	371,477 05	385,355 34	14,089 84	211 55	371,265 50	.....
146	Richmond Harbor.....	10,000 00	10,000 00	.....	.....	10,000 00	.....
147	Richmond Island Harbor.....	120,000 00	120,000 00	155 78	155 78	119,844 22	.....
147	Rockland Harbor.....	20,000 00	20,000 00	.....	.....	20,000 00	.....
147	Royals River.....	20,000 00	20,000 00	.....	.....	20,000 00	.....
147	Saco Harbor.....	127,000 00	143,013 87	16,017 12	3 25	126,986 75	.....
147	Saint Croix River.....	39,000 00	35,000 00	.....	.....	35,000 00	34,000 00
147	Sullivan River.....	35,000 00	35,000 00	.....	.....	35,000 00	.....
148	Union River.....	30,000 00	30,000 00	25 00	25 00	29,975 00	.....
148	Wells Harbor.....	5,000 00	5,000 00	.....	.....	5,000 00	.....
Total.....		1,475,884 48	1,461,294 48	56,405 12	2,995 12	1,404,889 36	68,000 00

MARYLAND.

148	Annapolis Harbor.....	10,000 00	794 02	.....	.....	794 02	9,205 98
148	Baltimore Harbor.....	1,065,000 00	835,000 00	.....	.....	835,000 00	230,000 00
148	Cambridge Harbor.....	35,000 00	35,000 00	2,687 70	.....	32,312 30	2,687 70
149	Chesapeake Bay.....	500 00	35,500 00	14 44	14 44	485 56	.....
149	Chester River.....	34,500 00	32,000 00	166 84	.....	31,833 16	2,666 84
149	Croftank River.....	10,000 00	10,000 00	.....	.....	10,000 00	.....
149	Crisfield Harbor.....	37,317 50	37,317 50	.....	.....	37,317 50	.....
149	Deal's Island Passage.....	5,000 00	5,000 00	.....	.....	5,000 00	.....
149	Elk River.....	25,000 00	25,000 00	.....	.....	25,000 00	.....
149	Leonardtown Harbor (Breton Bay).....	15,000 00	15,000 00	.....	.....	15,000 00	.....
149	Northeast River.....	15,500 00	15,500 00	.....	.....	15,500 00	.....
149	Patapsco River.....	293,100 00	294,634 93	2,007 77	472 84	292,627 16	.....
150	Pocomoke River.....	10,000 00	10,000 00	.....	.....	10,000 00	.....
150	Queenstown Harbor.....	14,000 00	14,000 00	.....	.....	14,000 00	.....
150	Saint Jerome's Creek.....	6,500 00	6,500 00	.....	.....	6,500 00	.....
150	Secretary Creek.....	6,000 00	6,000 00	.....	.....	6,000 00	.....
150	Susquehanna River.....	91,400 00	95,900 00	4,500 00	.....	91,400 00	.....
151	Treadhaven Creek.....	6,000 00	6,000 00	.....	.....	6,000 00	.....
151	Wicomico River.....	40,000 00	39,000 00	.....	.....	39,000 00	1,000 00
151	Worton Harbor.....	12,000 00	12,000 00	.....	.....	12,000 00	.....
Total.....		1,731,817 50	1,495,146 45	9,376 75	487 28	1,485,769 70	245,560 52

MASSACHUSETTS.

151	Bass River.....	20,150 41	20,150 41	07	07	20,150 34	.....
151	Boston Harbor.....	1,876,526 10	1,877,844 06	52,937 48	1,619 52	1,824,906 58	50,000 00
153	Duxbury Harbor.....	20,000 00	20,000 00	.....	.....	20,000 00	.....
153	East Dennis Breakwater.....	1,500 00	1,542 43	1,534 86	1,492 43	7 57	.....
153	Edgartown Harbor.....	23,000 00	23,000 00	.....	.....	23,000 00	.....
153	Fall River Harbor.....	30,000 00	30,000 00	.....	.....	30,000 00	.....
153	Gloucester Harbor.....	10,000 00	10,686 84	.....	.....	10,000 00	.....
153	Hyannis Harbor.....	123,431 82	123,619 16	261 58	74 24	123,357 58	.....
154	Marblehead Harbor.....	900 00	900 00	150 58	150 58	749 42	.....
154	Merrimac River.....	218,366 72	232,941 54	15,474 82	900 00	217,466 72	.....
154	Nantucket Harbor.....	120,834 75	70,924 75	63	4,910 63	70,924 12	45,000 00
155	New Bedford Harbor.....	37,691 37	30,190 37	155 73	7,656 73	30,034 64	.....
155	Newburyport Harbor.....	90,000 00	40,000 00	.....	.....	40,000 00	50,000 00
155	Plymouth Beach and Harbor.....	126,266 90	128,292 57	2,115 83	90 16	126,176 74	.....
156	Provincetown Harbor.....	126,918 44	126,569 55	3,316 58	3,665 47	123,252 97	.....
156	Salem Harbor.....	25,000 00	25,000 00	.....	.....	25,000 00	.....
157	Sandy Bay Breakwater.....	69,232 57	69,232 57	3 32	3 32	69,229 25	.....
157	Scituate Harbor.....	18,680 00	18,680 00	89 02	89 02	18,590 98	.....

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balances June 30, 1882.
MASSACHUSETTS—Continued.							
Taunton River	157	\$108,500 00	\$83,589 09	\$138 88	\$49 79	\$83,450 21	\$25,000 00
Wareham Harbor	157	50,000 00	50,000 00	.....	.....	50,000 00	.....
Wellfleet Harbor	158	5,000 00	5,000 00	.....	.....	5,000 00	.....
Wood's Holl Harbor	158	17,500 00	17,517 24	34 48	17 24	17,482 76	.....
Total		3,119,499 08	3,005,680 58	76,900 70	20,719 20	2,928,779 88	170,000 00
MICHIGAN.							
Alpena Harbor (Thunder Bay)	158	4,500 00	5,064 64	564 64	.....	4,500 00	.....
An Sabie River	158	106,000 00	106,000 00	.....	.....	106,000 00	.....
Belle River, harbor of refuge	158	7,000 00	7,000 00	.....	.....	7,000 00	.....
Black Lake Harbor	158	229,615 31	229,622 66	8 54	1 19	229,614 12	.....
Charlevoix Harbor	159	51,000 00	51,000 00	.....	.....	51,000 00	.....
Cheboygan Harbor	159	103,000 00	103,000 00	.....	.....	103,000 00	.....
Clinton River	159	19,500 00	19,608 44	108 44	.....	19,500 00	.....
Detroit River	159	275,000 00	275,000 00	.....	.....	275,000 00	.....
Eagle Harbor	160	97,000 00	99,176 51	5,676 51	.....	93,500 00	3,500 00
Frankfort Harbor (formerly "Anx Bees Sees")	160	189,341 00	189,348 97	7 97	.....	189,341 00	.....
Grand Haven Harbor	160	402,000 00	373,271 22	1,271 22	.....	372,000 00	30,000 00
Grand Marais, harbor of refuge	161	30,000 00	2,500 00	.....	.....	2,500 00	27,500 00
Grand River	161	10,000 00	8,000 00	.....	.....	8,000 00	2,000 00
Lake Huron, harbor of refuge	161	825,000 00	796,000 00	1,000 00	.....	795,000 00	30,000 00
La Plaisance Bay	161	19,803 07	20,003 02	309 08	100 13	19,633 94	.....
Ladington Harbor (formerly "Pere Marquette")	162	183,000 00	183,000 00	90	90	182,909 10	.....
Manistee Harbor	162	203,000 00	203,000 87	87	.....	203,000 00	.....
Manistique Harbor	162	6,000 00	4,000 00	.....	.....	4,000 00	2,000 00
Marquette Harbor	162	271,500 00	271,500 00	.....	.....	271,500 00	.....
Menominee Harbor (Michigan and Wisconsin)	230	.....	.....	.....	.....	.....	.....
Monroe Harbor	163	212,515 27	212,513 06	19 71	21 92	212,493 35	.....
Muskegon Harbor	163	176,500 00	176,500 00	.....	.....	176,500 00	.....
New Buffalo Harbor	164	78,000 00	78,756 23	756 23	.....	78,000 00	.....
Ontonagon Harbor	164	237,600 00	237,682 41	82 41	.....	237,600 00	.....
Pontwater Harbor	164	165,000 00	165,000 00	.....	.....	165,000 00	.....
Portage Lake, harbor of refuge	165	30,000 00	30,000 00	.....	.....	30,000 00	.....
Saginaw River	165	211,000 00	210,000 00	.....	.....	210,000 00	1,000 00
Saint Clair River	165	61,500 00	61,500 00	.....	.....	61,500 00	.....
Saint Clair Flats and Canal	165	437,389 60	437,535 59	206 23	24	437,389 36	.....
Saint Joseph's Harbor	166	283,143 00	283,634 18	521 98	80	283,112 20	.....
Saint Mary's River and Saint Mary's Falls Canal	167	2,629,000 00	2,568,617 88	4 85	386 97	2,568,613 03	60,000 00
Saugatuck Harbor	167	85,500 00	85,500 00	.....	.....	85,500 00	.....
Sebewaing River	168	15,000 00	15,000 00	.....	.....	15,000 00	.....
South Haven Harbor	168	159,500 00	159,500 00	.....	.....	159,500 00	.....
White River Harbor	168	171,000 00	171,337 53	337 53	.....	171,000 00	.....
Total		7,984,877 25	7,839,233 21	10,877 11	521 15	7,828,356 10	156,000 00
MINNESOTA.							
Duluth Harbor	169	290,000 00	290,003 00	3 00	.....	290,000 00	.....
Grand Marais Harbor	169	40,000 00	40,000 00	.....	.....	40,000 00	.....
Meeker's Island lock and dam (Mississippi River)	231	.....	.....	.....	.....	.....	.....

169	Minnesota River	117,500 00	117,500 00	117,500 00	117,500 00
230	Mississippi River (Minnesota, Wisconsin, &c.)				
257	Red River of the North (Minnesota and Dakota)				
231	Saint Anthony's Falls (Mississippi River)				
259	Saint Croix River (Minnesota and Wisconsin)				
	Total	447,503 00	3 00	447,503 00	
MISSISSIPPI.					
170	Big Sunflower River	32,000 00		32,000 00	
170	Cold water River	11,000 00		11,000 00	
230	Mississippi River (Mississippi, Arkansas, &c.)				
170	Noxubee River	20,000 00		20,000 00	
170	Pascagoula River	94,400 00		78,802 04	20,724 79
171	Pearl River	71,000 00		9,000 00	9,000 00
171	Tallahatchie River	18,000 00		18,000 00	
171	Tehula Lake	3,000 00		3,000 00	
237	Vicksburg Harbor (Mississippi River)				
261	Warrior and Tombigbee Rivers (Mississippi and Alabama)	3,500 00		3,500 00	
171	Yallahusha River	125,000 00		125,000 00	
171	Yazoo River				
	Total	377,900 00	5,126 83	300,302 04	20,724 79
MISSOURI.					
225	Black River (Missouri and Arkansas)				
171	Cuivre River	7,000 00		7,000 00	
228	Current River (Missouri and Arkansas)				
172	Gauley River	15,000 00		15,000 00	
230	Mississippi River (Missouri, Illinois, &c.)				
248	Missouri River (Missouri Rivers (Missouri, Illinois, &c.))				
251	Missouri River (Missouri, Kansas, Nebraska, &c.)				
257	Osage River (Missouri and Kansas)				
257	Saint Louis Harbor (Mississippi River)				
236	Saint Louis Harbor (Mississippi River)				
262	White, Black, and Saint Francis Rivers (Missouri and Arkansas)				
	Total	22,000 00		22,000 00	
NEW HAMPSHIRE.					
172	Cochecho River	95,000 00		95,000 00	
172	Exeter River	35,000 00		35,000 00	
172	Lamprey River	10,000 00		10,000 00	
173	Portsmouth Harbor	55,000 00		28,000 00	27,000 00
173	Winnipisogee Lake	7,500 00		7,500 00	
	Total	202,500 00		175,500 00	27,000 00
NEW JERSEY.					
173	Cheesequake's Creek	25,000 00		1,000 00	
173	Cohansey Creek	31,000 00		31,000 00	
173	Cranberry Inlet	1,000 00		1,000 00	
228	Delaware River (New Jersey, Pennsylvania, &c.)		31		31
173	Elizabeth River	19,000 00		19,000 00	
173	Flat Beach	100 00	29 20	70 80	
174	Little Egg Harbor	23,500 00		15,048 00	
174	Manasquan River	32,000 00		31,000 00	1,000 00
174	Mattawan Creek	15,000 00		15,000 00	
174	Newark Bay	12,000 00		11,875 67	
174	New Brunswick Harbor	13,963 00	22 12	13,940 88	
174	Passaic River	194,000 00	2,452 62	192,067 38	1,932 62
175	Rahway River	30,000 00	359 30	30,000 00	
175	Rancocas River	10,000 00		10,000 00	
175	Raritan Bay	50,000 00		50,000 00	
175	Raritan River	385,000 00		365,000 00	20,000 00
175	Salem River	13,000 00		13,000 00	
175	Shrewsbury River	164,500 00	7,135 21	153,494 16	11,000 00

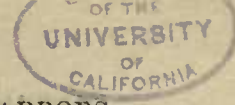
Recapitulation of rivers and harbors by States and localities—Continued.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balances June 30, 1882.
NEW JERSEY—Continued.							
South River	176	\$66,000 00	\$21,000 00			\$21,000 00	\$45,000 00
Staten Island Channel (New York and New Jersey)	259						
Theker's Island (Flat Beach)	174						
Woodbridge Creek	176	14,000 00	14,258 27	\$258 27		14,000 00	
Total		1,099,063 00	1,015,616 46	28,119 88	\$8,633 80	987,496 58	102,932 62
NEW YORK.							
Black River	176	42,401 00	42,401 00	329 86	329 86	42,071 14	
Black Rock Harbor	176	52,098 00	52,596 12	501 12	3 00	52,095 00	
Buffalo Harbor	176	1,524,880 41	1,464,089 98	7,376 41	33,166 84	1,456,713 57	35,000 00
Buttermilk Channel	177	120,000 00	70,000 00			70,000 00	50,000 00
Canarsie Bay	178	15,000 00	10,000 00			10,000 00	5,000 00
Canarsie Creek	178	57,410 00	57,410 00			57,410 00	
Canaragus Creek	178	290,978 40	299,942 07	10,234 60	1,270 93	289,707 47	
Charlotte Harbor	228						
Delaware River (New York, Pennsylvania, &c.)	179	444,579 38	445,735 20	1,256 35	100 53	444,478 85	
Dunkirk Harbor	179	54,000 00	47,000 00			47,000 00	7,000 00
East Chester Creek	180	2,745,000 00	2,695,000 00			2,095,000 00	50,000 00
East River and Hell Gate	180	39,000 00	31,000 00			31,000 00	8,000 00
Echo Harbor, New Rochelle	180	45,000 00	45,000 00			45,000 00	
Finishing Bay	178						
Genesee River (Charlotte Harbor)	180	40,000 00	30,000 00			30,000 00	10,000 00
Gowanus Bay	181	361,771 80	368,504 59	6,732 79		361,771 80	
Great Sodus Bay	181	410,000 00	10,000 00			10,000 00	400,000 00
Harlem River	181						
Hudson River	181	1,225,188 00	1,180,434 20	246 20		1,180,188 00	45,000 00
Huntington Harbor	182	22,500 00	22,500 00			22,500 00	
Little Sodus Bay	182	218,840 41	224,616 88	5,776 47		218,840 41	
Newtown Creek	183	10,000 00	10,000 00			10,000 00	
Niagara River	183	5,000 00	5,000 00			5,000 00	
Oak Orchard Harbor	183	173,500 00	187,379 60	13,879 60		173,500 00	
Ogdensburg Harbor	183	110,000 00	116,801 67	7,716 22	914 55	109,085 45	
Olcott Harbor	184	118,000 00	128,000 00	10,000 00		118,000 00	
Oswego Harbor	184	1,331,487 87	1,341,719 19	10,247 24	15 92	1,331,471 95	
Paconic River	185	25,000 00	25,000 00			25,000 00	
Plattsburgh Harbor	185	139,180 01	146,533 19	7,353 18		139,180 01	
Port Chester Harbor	186	12,000 00	10,050 00			10,050 00	1,950 00
Port Jefferson Harbor	186	72,200 00	72,200 00			72,200 00	
Portland Harbor	186	56,615 00	56,711 00	268 64	173 64	56,442 36	
Port Ontario Harbor	186	50,000 00	52,021 33	2,357 97	336 64	49,663 36	
Pultneyville Harbor	187	67,000 00	67,000 00			67,000 00	
Rondout Harbor	187	90,000 00	90,000 00			90,000 00	
Sacketts Harbor	187	6,000 00	5,487 00	9 55	522 55	5,477 45	
Sag Harbor	187	150 00	150 00	15 71	15 71	134 29	
Sandy Creek	187	300 00	300 00		172 56	127 44	
Sandy Hook Channel	187	116,530 00	142,183 20	63,300 00	37,646 80	78,883 20	
Sheepshead Bay	188	8,000 00	1,000 00			1,000 00	7,000 00
Staten Island Channel (New York and New Jersey)	259						
Staten Island Ice-breaker	188	19,500 00	20,502 10	1,019 90	17 80	19,482 20	
Stumpawamus Inlet	188	5,000 00	1,000 00			1,000 00	4,000 00
Ticonderoga River	188	5,000 00	5,000 00			5,000 00	
Waddington Harbor	188	35,500 00	35,500 00			35,500 00	
Whitell Harbor	188	33,000 00	33,000 00			33,000 00	

Wilson Harbor.....	189	40,000 00	40,000 00	148,794 37	74,687 33	40,000 00	9,539,973 95	622,950 00
Total.....		10,237,611 28	9,688,768 32					
NORTH CAROLINA.								
Beaufort Harbor.....	189	35,000 00	15,000 00				15,000 00	20,000 00
Cape Fear River.....	189	1,070,728 92	1,599,608 15		2,607 30	3,728 07	1,597,000 85	70,000 00
Contentina Creek.....	190	10,000 00	10,000 00				10,000 00	
Croatan Sound.....	190	50,000 00	41,610 28		3,521 39	11,911 11	38,088 89	
Currituck Sound.....	190	100,000 00	101,731 59		1,731 59		100,000 00	
Dan River (North Carolina and Virginia).....	228							
Edenton Harbor.....	190	5,000 00	5,000 00				5,000 00	
Entrances to the Dismal Swamp Canal (North Carolina and Virginia).....	229							
French Broad River (North Carolina and Tennessee).....	230							
Littlington River.....	190	3,000 00						
Neuse River.....	190	160,000 00	152,557 53		7,587 53		145,000 00	3,000 00
New River.....	191	50,000 00	51,440 10		2,606 56	1,166 46	48,833 54	15,000 00
North Landing River (North Carolina and Virginia).....	254							
Ocracoke Inlet.....	191	133,750 00	133,807 68		75 28	17 60	133,732 40	
Pamlico and Tar Rivers.....	191	48,000 00	50,300 41		2,300 41		48,000 00	
Pasquotank River.....	192	80 00	80 00		32 75		47 25	
Perquimans River.....	192	2,500 00	2,500 00				2,500 00	
Roanoke River.....	192	45,000 00	45,000 00				45,000 00	
Savannah River.....	192	6,000 00	6,427 20				6,000 00	
Town Creek.....	192	1,000 00			427 20			
Trent River.....	192	22,000 00	25,151 24		3,151 24		22,000 00	1,000 00
Waccamaw River (North Carolina and South Carolina).....	261							
Washington Harbor.....	192	5,000 00	5,000 00				5,000 00	
Yadkin River.....	192	52,000 00	55,724 39		15,724 39		4,000 00	12,000 00
Total.....		2,399,058 92	2,301,238 57	40,035 64	16,855 99	2,231,202 93		121,000 00
OHIO.								
Ashtabula Harbor.....	193	330,710 86	330,811 94		512 97	411 89	330,298 97	
Black River Harbor.....	193	163,204 77	155,765 70		582 61	6,021 68	155,183 09	2,000 00
Cincinnati Ice Harbor.....	194	50,000 00	50,000 00				50,000 00	
Cleveland Harbor.....	194	923,864 84	701,273 44		717 29	1,311 69	700,556 15	231,997 00
Connectaut Harbor.....	195	103,719 39	105,254 72		1,665 70	130 37	103,589 02	
Cunningham Creek.....	195	19,781 12	19,781 12		2 31	2 31	19,778 81	
Grand River Harbor (Fairport).....	196	216,670 29	216,854 92		4,687 93	3 30	212,166 99	4,500 00
Huron River and Harbor.....	196	104,273 71	104,293 50		22 84	3 05	104,270 66	
Maumee River.....	197	27,000 00	27,001 30		1 30		27,000 00	
Muskingum River Ice Harbor.....	197	110,000 00	110,000 00				110,000 00	
Ohio River (Ohio, Kentucky, &c.).....	255							
Port Clinton Harbor.....	197	48,000 00	48,000 00				48,000 00	
Rocky River Harbor.....	197	39,000 00	37,610 00				37,610 00	1,390 00
Sandusky City Harbor.....	198	235,480 00	234,610 47		461 54	331 07	234,148 93	1,000 00
Sandusky River.....	198	47,500 00	47,500 00				47,500 00	
Toledo Harbor.....	198	585,000 00	566,001 30		1,001 30		565,000 00	20,000 00
Vermillion River and Harbor.....	199	111,942 31	111,942 53		13 76	13 54	111,928 77	
Total.....		3,116,147 29	2,866,700 94	9,669 55	8,228 90	2,857,031 39		250,887 00
OREGON.								
Cascades of the Columbia River—Canal—(Oregon and Washington).....	226							
Columbia River (Oregon and Washington).....	227							
Coos Bay Harbor.....	199	70,000 00	70,000 00				70,000 00	
Coequille River.....	199	10,000 00	10,000 00				10,000 00	
Umpqua River.....	199	22,500 00	19,000 00		1,185 89		17,814 11	4,685 80
Willamette River.....	199	220,500 00	229,504 76		13 23	8 47	229,491 53	
Lower Willamette and Columbia Rivers.....	200	245,000 00	245,000 00				245,000 00	
Willamette and Yamhill Rivers.....	200	27,000 00	27,000 00				27,000 00	
Yaquina Bay.....	200	50,000 00	50,000 00				50,000 00	
Total.....		654,000 00	650,504 76	1,199 12	8 47	649,305 64		4,685 80

Recapitulation of rivers and harbors by States and localities—Continued.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balance June 30, 1882.
PENNSYLVANIA.							
Allegheny River.....	200	\$55,000 00	\$55,000 00			\$55,000 00	
Chester Creek.....	201	3,000 00	3,000 00			3,000 00	
Chester Harbor.....	201	27,100 00	26,081 74	\$110 75	\$529 01	26,570 99	
Delaware River (Pennsylvania, New York, Delaware, and New Jersey).....	228						
Erie Harbor (formerly Presque Isle).....	201	573,942 23	559,909 60	2,133 44	166 07	557,776 16	\$16,000 00
Marcus Hook Harbor.....	202	169,000 00	141,182 12	2,427 64	245 52	138,754 48	30,000 00
Monongahela River (Pennsylvania and West Virginia).....	253						
Ohio River (Pennsylvania, Ohio, and West Virginia).....	255						
Presque Isle Harbor. (See Erie Harbor).....	279						
Schuylkill River.....	203	300,000 00	238,479 39	2,479 72	33	255,999 67	44,000 00
Susquehanna River.....	203	30,000 00	35,000 00	5,000 00		30,000 00	
Youghiogheny River. (See Surveys).....	267						
Total.....		1,158,042 23	1,079,252 85	12,151 55	940 93	1,067,101 30	90,000 00
RHODE ISLAND.							
Block Island Harbor.....	203	291,000 00	291,000 00			291,000 00	
Church's Cove Harbor.....	203	28,200 00	28,200 00	4 81	4 81	28,195 19	
Little Narragansett Bay (Rhode Island and Connecticut).....	230						
Narragansett Bay. (See Providence River and Narragansett Bay).....	204						
Newport Harbor.....	204	53,500 00	53,500 00			53,500 00	
Pawcatuck River (Rhode Island and Connecticut).....	257						
Pawtucket River.....	204	52,000 00	51,994 04		5 96	51,994 04	
Potowdown River.....	204	5,000 00	5,000 00			5,000 00	
Providence River and Harbor.....	204	64,000 00	66,041 20	2,117 37	76 17	63,923 83	
Providence River and Narragansett Bay.....	205	230,000 00	230,048 00	48 00		230,000 00	
Wickford Harbor.....	205	10,000 00	10,000 00			10,000 00	
Total.....		733,700 00	735,783 24	2,170 18	86 94	733,613 06	
SOUTH CAROLINA.							
Ashlepool River.....	205	1,300 00	1,300 00			1,243 95	
Ashley River.....	205	2,500 00	2,500 00	56 05		2,500 00	
Charleston Harbor.....	205	894,700 00	894,700 00			894,700 00	
Georgetown Harbor.....	205	4,000 00	3,000 00	03	1,000 03	2,999 97	
Great Pedee River.....	205	13,000 00	14,311 61	1,311 61		13,000 00	
Santee River.....	206	22,000 00	2,000 00			2,000 00	20,000 00
Sullivan's Island. (See Charleston Harbor).....	205						
Town Creek and Stono River.....	206	7,500 00	6,954 26	56 05	601 79	6,498 21	
Waccamaw River (South Carolina and North Carolina).....	261						
Waptoo Cut.....	206	10,000 00					10,000 00
Wateree River.....	206	8,000 00	8,000 00			8,000 00	
Total.....		963,000 00	932,765 87	1,423 74	1,657 87	931,342 13	30,000 00
TENNESSEE.							
Big Hatchie River.....	206	13,500 00	13,500 00			13,500 00	
Cahey Fork River.....	206	10,000 00	10,000 00			10,000 00	
Clinch River.....	206	13,000 00	13,000 00			13,000 00	
Cumberland River (Tennessee and Kentucky).....	227						
Duck River.....	207	10,000 00	10,000 00			10,000 00	
French Broad River (Tennessee and North Carolina).....	230						



APPROPRIATIONS AND EXPENDITURES FOR RIVERS AND HARBORS.

281

207	Hiawasee River.....	27,500 00				27,500 00			
237	Memphis Harbor. (See Mississippi River).....								
230	Mississippi River (Tennessee, Arkansas, &c.).....	6,500 00				6,500 00			
207	Obeds River.....	5,000 00				5,000 00			
207	Red River.....								
260	Tennessee River (Tennessee, Kentucky, and Alabama).....	85,500 00				85,500 00			
	Total.....								
TEXAS.									
207	Aransas Pass and Bay.....	180,000 00				180,000 00			
207	Brazos River.....	80,000 00				80,000 00			
207	Brazos Santiago Harbor.....	51,000 00				51,000 00			
208	Colorado River.....	20,238 22	462 58	224 36		19,775 64			
228	Cypress Bayou (Texas and Louisiana).....								
208	Galveston Harbor and Bay.....	1,585,200 00	18 06			1,403,200 00			
209	Indianola Harbor.....	180,000 00				155,500 00			
209	Matagorda Bay. (See Indianola Harbor).....	21,000 00	88			21,000 00			
209	Neches River.....								
258	Paso Cavallo Inlet. (See Indianola Harbor).....								
209	Red River of the South (Texas, Arkansas, and Louisiana).....			7 08		16,992 92			
209	Rio Grande River.....	17,802 41	809 49			192,913 00			
210	Sabine Pass and Bay.....	313,000 00				16,500 00			
210	Sabine River.....	28,000 00	44 58	44 60		1,455 40			
210	San Antonio River.....	1,500 00				4,913 98			
210	Survey of rivers and harbors.....	5,000 00	1,586 00	86 02		22,882 89			
210	Trinity River.....	29,500 00	1,617 98	1,617 11		5,000 00			
	Total.....	2,566,200 00	4,540 45	1,979 17		2,166,133 83			
VERMONT.									
210	Burlington Harbor.....	432,980 20	57,064 07	6,669 13		426,311 07			
211	Hero Islands Channel.....	21,000 00				21,000 00			
211	Other Creek.....	32,000 00	4,830 91			32,000 00			
211	Swanton Harbor.....	66,000 00	2,348 26			66,000 00			
	Total.....	551,980 20	64,243 24	6,669 13		545,311 07			
VIRGINIA.									
211	Acootank Creek.....	5,000 00				5,000 00			
211	Appomattox River.....	300,000 00				300,000 00			
212	Archer's Hope River.....	5,000 00				5,000 00			
212	Aquia Creek.....	10,500 00				10,500 00			
212	Blackwater River.....	12,500 00				12,490 36			
212	Chickahominy River.....	10,000 00				8,500 00			
228	Dan River (Virginia and North Carolina).....								
212	Elizabeth River.....	40,080 00	55 90	55 90		40,024 10			
229	Entrances to the Dismal Swamp Canal (Virginia and North Carolina).....								
213	Hampton River.....	12,000 00				12,000 00			
213	James and Appomattox Rivers.....	710,500 00	268 11	268 11		710,231 89			
213	Mattaponi River.....	5,800 00				5,800 00			
213	Naumond River.....	37,000 00				37,000 00			
213	Neabsco Creek.....	5,000 00				5,000 00			
254	New River (Virginia and West Virginia).....								
214	Nomoni Creek.....	30,500 00				30,500 00			
214	Norfolk Harbor.....	285,000 00	9,732 90			240,065 17			
254	North Landing River (Virginia and North Carolina).....								
214	Nottoway River.....	7,000 00				7,000 00			
214	Ocoquan River.....	25,000 00				25,000 00			
214	Onancock Harbor.....	8,000 00				8,000 00			
214	Pagan Creek.....	10,000 00				9,944 47			
215	Pamunkey River.....	5,000 00				5,000 00			
215	Potomac River at Mount Vernon.....	8,500 00				8,500 00			
215	Rappahannock River.....	133,500 00	180 82	180 82		134,319 18			

Recapitulation of rivers and harbors by States and localities—Continued.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balance June 30, 1882.
VIRGINIA—Continued.							
Staunton River.....	215	\$17,500 00	\$17,500 00			\$17,500 00	
Totusky River.....	215	5,000 00	500 00			500 00	\$4,500 00
Urbana Creek.....	215	11,500 00	11,500 00			11,500 00	
York River.....	215	35,000 00	35,000 00			35,000 00	
Total.....		1,734,880 00	1,693,612 90	\$10,237 73	\$504 83	1,683,375 17	51,000 00
WASHINGTON TERRITORY.							
Cowlitz River.....	216	3,000 00	3,000 00			3,000 00	
Skagit River.....	216	2,500 00	2,500 00			2,500 00	
Total.....		5,500 00	5,500 00			5,500 00	
WEST VIRGINIA.							
Elk River.....	216	15,000 00	15,000 00			15,000 00	
Great Kanawha River.....	216	1,382,000 00	1,282,000 00			1,282,000 00	110,000 00
Guyandotte River.....	217	8,500 00	7,100 00			7,100 00	1,400 00
Little Kanawha River.....	217	98,300 00	83,300 00			83,300 00	15,000 00
Monongahela River (West Virginia and Pennsylvania).....	253						
New River (West Virginia and Virginia).....	254						
Ohio River (West Virginia, Ohio, &c.).....	255						
Shenandoah River.....	217	17,500 00	500 00	312 20		187 80	17,312 20
Total.....		1,531,300 00	1,387,900 00	312 20		1,387,587 80	143,712 20
WISCONSIN.							
Ahnapee Harbor.....	217	113,000 00	113,000 00			113,000 00	
Chippewa River.....	217	48,000 00	48,000 00			48,000 00	
Fox and Wisconsin Rivers.....	218	2,283,723 97	2,275,437 94	6,915 62	201 65	2,268,522 32	15,000 00
Green Bay Harbor.....	219	178,500 00	178,500 00			178,500 00	
Kenosha Harbor (formerly Southport).....	219	198,961 41	202,257 24	3,301 66	5 83	198,955 58	
Keweenaw Harbor.....	220	5,000 00	5,000 00			5,000 00	
Manitowee Harbor.....	220	216,500 00	216,508 17	8 17		216,500 00	
Menominee Harbor (Wisconsin and Michigan).....	230						
Milwaukee Harbor.....	220	403,347 45	397,892 30	5,108 79	563 94	392,783 51	10,000 00
Mississippi River (Wisconsin, Iowa, &c.).....	230						
Neeah River.....	221	2,500 00	2,500 00	155 21		2,344 79	
Oconto Harbor.....	221	10,000 00					
Port Washington Harbor.....	221	137,500 00	137,500 00			137,500 00	10,000 00
Racine Harbor.....	221	187,410 00	189,373 09	1,964 76	1 67	187,408 33	
Rock River (Wisconsin and Illinois).....	259						
Saint Croix River (Wisconsin and Minnesota).....	259						
Sheboygan Harbor.....	222	190,598 91	189,918 00	6,319 09		183,598 91	7,000 00
Southport Harbor. (See Kenosha Harbor).....	219						
Sturgeon Bay, harbor of refuge.....	223	130,000 00	130,000 00			130,000 00	

DISTRICT OF COLUMBIA.

MISCELLANEOUS.

[illegible]

Recapitulation of rivers and harbors by States and localities—Continued.

Location.	Page.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balances June 30, 1882.
REPAIRS, &c.							
Repairs and extension of public works on rivers and harbors.....	262	\$3,500,000 00	\$3,596,168 48	\$96,168 48	.....	\$3,500,000 00	.....
Repairs of harbors on the Lakes.....	262	270,000 00	274,317 35	4,387 96	\$70 61	293,929 39	.....
Preservation and repair of harbor and river improvements.....	263	85,000 00	87,813 08	3,544 37	731 29	84,268 71	.....
Repairs and contingencies, Atlantic Coast.....	263	110,000 00	127,100 37	17,100 37	.....	110,000 00	.....
Transportation, fuel, &c.....	263	12,127 12	15,749 44	3,925 63	303 31	11,823 81	.....
Total.....		3,977,127 12	4,101,148 72	125,126 81	1,105 21	3,976,021 91	.....
SURVEYS.							
Atlantic Coast.....	264	60,000 00	85,525 91	25,525 91	.....	60,000 00	.....
Pacific Coast.....	264	50,000 00	50,811 51	811 51	.....	50,000 00	.....
Northwestern Lakes.....	265	175,000 00	178,489 33	3,848 58	359 25	174,640 75	.....
Western and Northwestern Rivers.....	265	275,334 40	283,418 22	8,418 22	334 40	275,000 00	.....
Atlantic and Pacific Coasts, Lakes, and Rivers.....	265	1,265,000 00	1,276,812 58	16,027 42	.....	1,254,785 16	.....
Hydrographic survey of the Lakes.....	266	2,930,379 00	2,948,000 55	40,150 42	22,528 71	2,907,850 14	\$10,214 84
Youghiogheny River to Cumberland.....	267	210,000 00	209,148 14	.....	851 86	209,148 14	15
Norfolk to the Atlantic Ocean.....	267	20,000 00	20,000 00	.....	.....	20,000 00	.....
Total.....		4,985,713 40	5,046,205 25	94,782 06	24,074 22	4,951,424 19	10,214 99
DREDGING MACHINES, &c.							
Steam dredging-machines for the Lakes.....	267	122,682 96	122,097 47	1,741 87	2,327 36	120,355 60	.....
Purchase of Shreve's patent for dredging machines.....	270	50,000 00	50,000 00	.....	.....	50,000 00	.....
Suag-boats and dredge-boats.....	268	796,000 00	804,680 83	9,226 43	545 60	795,454 40	.....
Construction of an iron steamer.....	268	50,000 00	50,000 00	.....	.....	50,000 00	.....
Charts, &c.....	269	108,000 00	95,266 86	3,596 03	16,329 17	91,670 83	.....
Removal of sunken vessels.....	269	8,574 58	16,177 48	8,336 88	.....	7,840 60	733 98
Total.....		1,135,257 54	1,138,222 64	22,901 21	19,202 13	1,115,321 43	733 98
Grand total.....		111,299,464 79	106,882,717 63	1,086,313 70	690,631 44	105,796,403 93	4,812,429 42

RIVERS AND HARBORS—RECAPITULATION BY STATES.

States.	Amount of annual appropriation.	Expenditure by warrants.	Repayments.	Amount carried to the surplus fund.	Net expenditures.	Balances June 30, 1882.
Alabama	\$1,091,751 82	\$909,833 18	\$13,690 81	\$20,609 45	\$956,142 37	\$115,000 00
Arkansas	316,500 00	315,000 00			315,000 00	1,500 00
California	1,717,000 00	1,495,757 11	2,328 57		1,493,428 54	223,571 46
Connecticut	1,585,926 83	1,531,170 70	3,722 13	18,478 26	1,527,448 57	40,000 00
Delaware	3,327,164 69	3,063,414 97	19,778 77	243,128 49	3,043,636 20	40,400 00
Florida	760,350 09	683,847 72	3,494 88	30,997 25	680,352 84	49,000 00
Georgia	1,412,596 64	1,367,095 26	3,031 19	36,352 71	1,364,064 07	12,179 86
Idaho Territory	10,000 00	10,000 00			10,000 00	
Illinois	2,672,305 00	2,376,013 18	23,708 28	10	2,352,304 90	320,000 00
Indiana	786,203 92	787,700 69	1,501 92	5 15	786,198 77	
Iowa	2,500 00	2,500 00		86	2,499 14	
Kentucky	457,000 00	367,500 00			367,500 00	89,500 00
Louisiana	245,400 00	151,985 21	4,175 63	8,690 42	147,809 58	88,900 00
Maine	1,475,884 48	1,461,294 48	56,405 12	2,995 12	1,404,889 36	68,000 00
Maryland	1,731,817 50	1,495,146 45	9,376 75	487 28	1,485,769 70	245,560 52
Massachusetts	3,119,489 08	3,005,680 58	76,800 70	20,719 20	2,928,779 88	170,000 00
Michigan	7,984,877 25	7,839,233 21	10,877 11	521 15	7,828,356 10	156,000 00
Minnesota	447,500 00	447,503 00	3 00		447,500 00	
Missouri	22,000 00	22,000 00			22,000 00	
Mississippi	377,900 00	300,302 04	5,126 83	20,724 79	295,175 21	62,000 00
New Hampshire	202,500 00	175,500 00			175,500 00	27,000 00
New Jersey	1,099,063 00	1,015,616 46	28,119 88	8,633 80	957,496 58	102,932 62
New York	10,237,611 28	9,683,768 32	148,794 37	74,637 33	9,539,973 95	622,950 00
North Carolina	2,399,038 92	2,301,238 57	40,035 64	16,855 99	2,261,202 93	121,000 00
Ohio	3,116,147 29	2,866,700 94	9,669 55	8,228 90	2,857,031 39	250,887 00
Oregon	654,000 00	650,504 76	1,199 12	8 47	649,305 61	4,685 89
Pennsylvania	1,158,042 23	1,079,252 85	12,151 55	940 93	1,067,101 30	90,000 00
Rhode Island	733,700 00	735,783 24	2,170 18	86 94	733,613 06	
South Carolina	963,000 00	932,765 87	1,423 74	1,657 87	931,342 13	30,000 00
Tennessee	85,500 00	85,500 00			85,500 00	
Texas	2,566,200 00	2,170,674 28	4,540 45	1,979 17	2,166,133 83	398,087 00
Vermont	551,980 20	609,554 31	64,243 24	6,669 13	545,311 07	
Virginia	1,734,880 00	1,693,612 90	10,237 73	5,504 83	1,683,375 17	51,000 00
Washington Territory	5,500 00	5,500 00			5,500 00	
West Virginia	1,531,300 00	1,387,900 00	312 20		1,387,587 80	143,712 20
Wisconsin	4,659,541 74	4,640,391 39	23,895 83	1,046 18	4,616,495 56	42,000 00
District of Columbia	291,500 00	253,500 00	298 00	298 00	253,202 00	38,000 00
Miscellaneous	39,667,664 77	38,611,398 35	262,259 59	120,942 11	38,349,108 76	1,197,613 90
Repairs, &c.	3,977,127 12	4,101,148 72	125,126 81	1,105 21	3,976,021 91	
Surveyors	4,985,713 40	5,046,206 25	94,782 06	24,074 22	4,951,424 19	10,214 99
Dredging machines, &c.	1,135,257 54	1,138,222 64	22,901 21	19,202 13	1,115,321 43	733 98
Grand total	111,299,464 79	106,882,717 63	1,086,313 70	690,631 44	105,796,403 93	4,812,429 42

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